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Introduction

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A death in the family is always the occasion for reflection and reminiscence. The recent loss of my father has led to just such reflection and reminiscence. What strikes me most, in this election year, is how much I shall miss the friendly yet pointed badinage between people of two irreconcilably different political persuasions. And this leads me to question why it is that I have never accepted the political views of one I greatly loved and respected. It is easier, I suspect, to pass on the family silver or Grandmother's teapot than it is to pass on ideas. Ideas, it would seem, although rarely truly original, require an element of personal confrontation and grappling with before they can become instrumental in one's actions. As Goethe once observed: "All truly wise thoughts have been thought already thousands of times; but to make them ours, we must think them over again honestly, till they take root in our personal experience."

Although my father's political ideas have yet to take root in my personal experience, there is no doubt that today history requires of all of us that we think over again honestly those ideas which undergird our conception of democracy. In a recent article in *The Atlantic Monthly*, James Mandel questions the efficacy of the contemporary public philosophy of procedural liberalism to allay the anxieties he suggests are eroding public and private life. These include a sense of loss of empowerment and control and the uneasy suspicion that the very moral fabric of our community is "unraveling around us." A diverse and multicultural society seems in danger of fraying at the edges; the center, in Yeats'

memorable phrase, cannot hold.

It was not supposed to be like this. The liberal vision of freedom as the right to choose our own ends with procedural guarantees to that right was to have defined religious, cultural, and moral controversy right out of the political picture. Theorists such as Kenneth Strike would write about the "thin" consensus such a vision demanded of its diverse constituents, John Rawls of justice as a matter of procedure based on a doctrine of fairness.

Arguing that the liberal vision of freedom no longer serves as a viable public philosophy, Mandel suggests reconsideration of Jeffersonian republican political theory, whose central tenet is that freedom inheres in shared self-government and public deliberation of the common good. But, Mandel goes on to observe,

> to deliberate well about the common good requires more than the capacity to choose one's ends and to respect other's right to do the same. It requires a knowledge of public affairs and also a sense of belonging, a concern for the whole, a moral bond with the community whose fate is at stake. To share in self-rule therefore requires that its citizens possess, or come to acquire, certain civic virtues.... The republican conception of freedom, unlike the liberal conception, requires a formative politics, a politics that cultivates in citizens the qualities of character that self-government require.[1]

The problem is, as Mandel observes, that the society for which such principles were adduced is vastly different from the young agrarian republic of Jefferson's day. Carving out a public sphere in an arena dominated by a global economy and multinational corporations is problematic; the idea of a nation/state seems less and less relevant to a viable politics of freedom. Mandel's solution is to seek out a multiplicity of communities of common interest—what Strike characterizes as moral communities—neighborhoods, institutions, ethnic groups to the end that sovereignty is "dispersed" and the opportunity to develop civic virtue increased.

Clearly, such a reappraisal of public philosophy as Mandel calls for has implications for education if schools are seen as one of the loci of that dispersed sovereignty. Further, it suggests a return to education's historic mission as the garden within which the flowers of civic virtue and democratic skills are cultivated. For many of our readers, it will suggest a reconsideration of, a thinking "over again honestly" of the work of John Dewey for whom such questions as Mandel raises provided the focus for his most profound thought. Oddly enough, however, in an article which traces the historical roots of contemporary political philosophy and recounts the various efforts made along the way to secure a democratic

way of life, Mandel never refers to Dewey. One might argue that, profound and prolific though his thought was, Dewey's views had little actual effect on the political landscape of his time. Even progressive education, the entity most often credited as Dewey's legacy, could boast of few genuinely Deweyan practices in its various manifestations. For some of the contributors to this issue it is the very failure of educators and politicians to grasp the implications of Dewey's thought that has contributed to the sorry political state we currently endure.

However, for others of our readers I have no doubt that the very mention of Dewey will set off alarms of disinterest, boredom, perhaps disdain. Dewey again? The *Journal of Thought*, as one of our contributors characterized it for me, is like an old cardigan, comfortable and familiar, but hardly on the cutting edge of fashion. Perhaps not, but the virtue of an old cardigan, the reason it still finds a place on one's shelf, is its ability to ward off the effects of a chilly climate. As Mandel's piece makes clear, our political climate today is one of frigid isolation among contending constituencies. The cutting edge of political fashion has failed to provide us with communal warmth. It is then no surprise that Dewey's thoughts, familiar though they may be, should still take root in the personal experience of those who think them over again honestly. No American thinker has ever brought to the problems of democratic living the originality and depth of thought as has Dewey. And no one can be blamed, if standing in the draft of the chilly winds of isolation, he or she seeks comfort in the thoughts of one who tried to understand that isolation and who tried to articulate a civic philosophy that would provide shelter and warmth for all.

Thus we begin this issue with Jeffrey Roth's review of David M. Steiner's *Rethinking Democratic Education: The Politics of Reform,* which he entitles "What Kind of Education Does a Modern Democratic Society Owe Its Citizens?" Steiner begins by criticizing the "bloodless proceduralism" of contemporary political theorists whose views have reduced education to a set of management techniques. His goal is to provide a "robust pedagogic program" that will equip citizens to handle the competing claims of individual desires and social goods. He bases his program on an amalgam of language, experience, and growth, grounding it in a synthesis of his reading of Protagoras, Rousseau, and Dewey. Roth provides a clear explication of this synthesis, but suggests that Steiner's philosophy is too strongly rooted in neo-Kantian soil to effect the changes he seeks. As an alternative model for democratic education, Roth proposes the work of Landon Beyer with its emphasis on participatory democracy and consensus building.

Sam Stack, in his piece entitled "Education and the Pursuit of

Happiness: John Dewey's Sympathetic Character," considers the deleterious effect on a democratic society of equating happiness with material well-being. Although Stack adduces evidence from Aristotle, Jefferson, and Dewey that there are broader parameters to the notion of the good life than merely its material aspect, it is the material, he argues, which has driven contemporary educational reform. Education has turned away from the exploration of ethical association to the exploitation of technological training thought to secure economic advantage. Echoing Mandel's indictment of the contemporary liberal vision of freedom, Stack warns that democracy puts itself at risk when individual conceptions of morality and the individual pursuit of happiness are superordinate to social welfare and ethics.

As Mandel points out, one of the putative virtues of procedural liberalism lies in its bracketing of differences. The hope of the liberal theorist is that a polity that guaranties his or her own end according to his or her own values, will engender a spirit of tolerance toward those pursuing different ends and values. Experience has shown, however, that such a bracketing is counterfactual, that differences have only given rise to the bitterest sectarian disputes. Peter M. Collins would argue perhaps that Mandel has been too hasty in dismissing the relevance of Thomas Jefferson to this contemporary dilemma. In "Jefferson on Philosophy of Religion and Public Education," Collins provides a careful reading of primary sources to suggest that Jefferson's espousal of a wall of separation between church and state has been widely misinterpreted. Because Jefferson made a distinction between religion and sectarian "religions"—a distinction carefully explicated by Collins—Collins contends that that infamous wall, intended to nullify sectarian influence on the political process, did not negate the central importance to civic well-being that Jefferson attached to religion. It was only through religious training as broadly conceived by Jefferson that schools, both public and private, might meet their primary goal, that of providing morally responsible citizens for the young republic. While Collins does not necessarily advocate a return to the Jeffersonian model of moral education, he argues that all educational decisions carry a moral dimension which Collins, like Jefferson, believes cannot be made outside a religious context. In celebrating Jefferson as the architect of the wall of separation between church and state, we have overlooked Jefferson's considerable attention to the role of religion in public education. Whether such a view is germane to the problem of articulating a public philosophy for today must be determined by the reader.

In their piece "Can There Be 'Rules' for Qualitative Inquiry?" Steven I. Miller and Marcel Fredricks address the question "from a context of

justification, how does a qualitative researcher know when and how a claim can be put forth as being credible?" Among other things, they suggest, a clear distinction between data and evidence must be made. Researchers must make clear at the outset not only what counts as evidence in support of their claims but why such evidence does so. They must provide an evaluative rationale for "weighing" the relative merits of quantitative and qualitative data when each are a part of the study. Finally, Miller and Fredricks offer several "rules" for use of a triangulation strategy in designing a research project, rules which sharpen the meaning of such terms as plausibility, confirmation, and credibility when assessing the findings of the project. Although obviously the intent of the authors of this piece is not to address the issue of a viable public philosophy, their work can nevertheless be construed as a valuable contribution to public discourse. As Jurgen Habermas and others have demonstrated, democratic discourse depends on the ability of speakers to redeem the validity claims implicitly raised in their arguments. In this piece, Miller and Fredricks provide a detailed examination of how some of those claims might more credibly be redeemed.

Perhaps no one devoted more thought to the question of legitimately warranting assertions than did Dewey as he worked out the lines of his philosophy of experimentalism. For Dewey, however, the rubrics of experimentalism were not to be limited to the researcher; indeed, they were the very stuff of democratic living and, for this reason, needed to form the basis of every educational endeavor. George C. Stone, in "John Dewey's Concept of Causation in Instructional Practice," contends that this is not as simple as it may appear. Dewey's notion of cause and effect is, Stone argues, a far more complex conception than is usually thought, a conception that requires of the student considerable skills both in reflexively recovering the past and in imaginatively projecting the future. Such a conception militates against the study of phenomena in isolation as contextless entities. Readers will quickly appreciate the ramifications of Stone's explication of Dewey's conception of cause and effect for the sort of reexamination of public philosophy called for by Mandel.

We conclude with quite a different sort of piece, one which in the opinion of this editor at least is based on assumptions quite at odds with the educational views expressed in the other articles in this issue. "The Naturalistic Education Theory: In Search of A Unified Learning Theory for Instructional Methodology and Tactical Education" by Charles R. Granger is an attempt to develop a comprehensive theory of curriculum modeled on field theory physics. Although Granger's argument seems little attuned to the problems of democratic living perhaps, in fact, his NET more truly serves citizens of the post-modern world. Mandel argues

that that world is characterized by mobility of capital, goods, and information across national boundaries and a concomitant loss of cultural cohesiveness and national identity. Habermas argues that it is characterized by technical rationality and strategic action. It is a world of efficiency and interchangeable parts, a world for which Granger's conception of "instructional engineering" based on "mechanistic" principles of human physiology seems singularly appropriate.

This issue of *the Journal of Thought* will, I hope, provoke in the reader many questions and perhaps even a rejoinder or two. Our mission is to stimulate dialogue; if we are, as our friend has said, the old cardigan of academic journals, let us hope at least that the wool is occasionally scratchy or too warm for comfort. Your essays, responses, and criticisms are both welcome and necessary if we are ever to change our academic wardrobe!

Note

1. Sandel, Michael. "America's Search for a New Public Philosophy," *The Atlantic Monthly,* March 1996, 58.

What Kind of Education Does a Modern Democratic Society Owe Its Citizens?

A Review of David M. Steiner's *Rethinking Democratic Education: The Politics of Reform*

Jeffrey Roth
University of Florida

Introduction

In *Rethinking Democratic Education: The Politics of Reform* (1994), David M. Steiner raises and answers a number of sharply-pointed questions, including the one drafted into service for the title of this review. The probing into scope and function that these questions undertake (*e.g.*, "what...makes a citizen worthy of the epithet 'educated'?" [p. xiii]; "if the teacher starts from the premise that the democratic is rational, what is left of the freedom to conceive of alternatives?" [p. 11]; "what kind of hurdle does a test represent, and what does being able to pass it promise?" [p. 18]) actually models the continuous interrogation of ends and means that Steiner believes lies at the heart of democratic education. It is also in the nature of questions such as "what kind of education does a modern democratic society owe its citizens?" (p. 183) that their answers have to be grounded in both theoretical argumentation and practical elaboration. Unlike other recent political theorists who have directed extensive attention to education (*e.g.*, Amy Gutmann and Benjamin Barber), Steiner is not reluctant to undertake the difficult task of translating the answers to his philosophical questions into what he calls the "instrumentalities" (p. 198) of the classroom.

Steiner's goals for his book are ambitious. He intends to ground his theory of democratic education in language, experience, and growth (p. xi). The exemplars he chooses to represent these three domains are the Sophist Protagoras, Jean-Jacques Rousseau, and John Dewey. Through an examination of a wide range of texts by these three thinkers (in the case of Protagoras, his speeches in several Platonic dialogues), he hopes to effect a synthesis that harmonizes their positions with regard to epistemology, political theory, and educational practice (p. xi). His ultimate goal, he tells us, is to "transpose...Protagoras's measure, Rousseau's dynamic perspectives, and Dewey's faith in organic continuum into a robust pedagogic program" (p. 198).

A Brief Outline of the Book's Organization

This review will focus on Steiner's efforts to integrate these three writers' perspectives on language, experience, and growth. The book's opening chapter ("The Politics of Reform") sets the stage and provides the rationale for undertaking a synthesis. Steiner first theorizes about tensions implicit in democracy and education's role in equipping citizens to handle competing claims of self and society. He then puts forth an argument that the emphasis both educational reformers and political theorists place on procedural adjustments rather than on disintegrative tendencies within democracy assures the impossibility of either group's recommendations producing any substantive alteration of school practice or larger social relations.

The book's next five chapters ("The Buried Triangle: Democracy, Philosophy, and Education in Ancient Athens"; "Rousseau and The Education of Restraint"; "The Education of the Sovereign"; "Dewey and The Vocabulary of Growth"; "The Education of Experience: The Politics of Language and Science") are devoted to extracting support from Protagoras, Rousseau, and Dewey for Steiner's theory that democracy effects an unstable truce among competing private and public demands and that education's role is to equip young people with the disposition to participate in an environment of continual internal and external contestation.

The book's final chapter, "Thinking to Learn," contains proposals that seek to translate Steiner's synthesized ideal of democratic education into a revised (primarily) high school curriculum that instantiates this ideal more closely than calls for higher standards or equal opportunities that come from procedure-centered educational reformers and political theorists.

A Brief Outline of the Review

Steiner's consultation with and appropriation of his sources represent a complex, serious engagement with three thinkers who are absolutely essential to any elaboration of education's role in engendering and sustaining democracy. The first task of this review then will be to delineate the main lines of argument that Steiner extracted from his sources, before rendering any judgment about either the completeness or persuasiveness of his resultant model for democratic education. It would be impossible to replicate in the space of a review all the ramified arguments that Steiner draws upon to construct his model; I will therefore confine my explication to what I take to be the core of Steiner's theory: the extent to which a democratic polity is a magnification of the individual's struggle to balance alternating needs for autonomy and association.

After summarizing the curricular proposals that Steiner believes would bring the ideal of democratic education closer to realization, I will point to some elements in this more concrete section of the book that seem to me out of touch not only with conditions experienced daily by students, teachers, and administrators in today's schools but also with important bodies of contemporary educational research and theory. Specifically, I will contrast Steiner's ultimately narcissistic, anxious vision of democratic education with the more communitarian, sanguine vision of Landon Beyer.

Part I: Delineating Steiner's Arguments

Theorizing about Democratic Education

Steiner begins somewhat uncritically by citing the ancient Greek gloss on democracy and applying it to the present: "in the United States political authority is ultimately vested in every citizen" (p. xi).[1] Citizens, however, routinely experience an on-going struggle: they feel an internal pull to satisfy their personal interests and an external pull to associate with peers. (We shall see how for Rousseau the simultaneity of these two longings—one toward isolation, the other toward stimulation—always threatens the equilibrium of any polity.) Steiner, following the Sophists, calls the process by which a citizen of a democracy weights which interest to act on "measur[ing] his or her society and self" (p. 208). Citizens-to-be learn how to measure the internal and external states they experience at institutions of education. Education reveals that these inner and outer states have multiple segments; each segment operates from a distinct perspective.

Competing claims among segments in the external world mirror the conflicts that citizen feel between their personal longings and their public obligations. Once again, education provides instruction for measuring and judging between conflicting interests. "Democratic education should offer citizens a chance to wrestle with the complex and multivarious issues that confront their polity" (p. 23). Schooling, according to Steiner, equips future citizens "to question the basic assumptions of their society" (p. 24).[2]

Preparing Citizens to Shape the World

By acquiring the competency to measure, that is, to take into full account, to give due reckoning to, the contradictions among loyalties, citizens learn to accommodate themselves to the tensions intrinsic to living in a democratic polity. Of all forms of governance, democracy alone grants equal worth to personal liberty and civic commitment. The overarching goal of democratic education is "preparing human beings to be the constructors, interrogators, and negotiators of their world" (p. xiv), "world" for Steiner here comprising both private and public spheres. In enumerating each of the capacities that democratic education aims to develop, Steiner places fabrication of a labile identity in first place, presumably because it must be the locus of mediation between competing loyalties. His full enumeration of the capacities that "constitute the ends of a democratic education" can be bulleted thus:

- to create and recreate an identity;
- to negotiate and renegotiate its components in a social setting;
- to judge the merit of public choices as they intersect with self-understanding and social needs;
- to engage in aesthetic experience;
- to develop intellectual habits equal to the task of discriminating among inescapably incommensurable demands (p. xiii).[3]

Shortcomings in Contemporary Reform Efforts

Steiner's gripe with educational reformers is that their focus is almost exclusively on improving techniques of educational management.[4] They are "unwilling to ask basic questions about...the constitution of an educated democratic citizen" (p. 26). Steiner shows courage in insisting that the cultural conversation about educational reform needs to start at the level of making assumptions explicit. His point is worth quoting in full:

> Certainly, reformers are ready to discuss the structures of education

> and are almost unanimously agreed on the need for more schooling, more coherence of subject matter, and more testing. But those same reformers are less forthcoming about the detailed content of an education, and they are reluctant to connect that content to an account of what constitutes a democratic public life. (p. 183)

Steiner levels a similar charge ("bloodless proceduralism," p. 12) at political theorists who recently have directed their attention to assaying the role of education in democratic societies. The main target of his complaint is the work of Amy Gutmann. (In fact, the very title of Steiner's book is a not-so-veiled attempt to redirect political theory beyond Gutmann's widely-discussed 1987 work, *Democratic Education*.) His bill of particulars against "her commitment to restricting herself to procedural educational recommendations" ends with this indictment: "In sum, Gutmann's anti-foundational commitments limit her willingness to identify the core values of democracy, and the result of that difficulty is a paucity of detail on curriculum" (p. 11).

Steiner sees a real danger, on the one hand, of championing educational reform without recourse to a theory about the competencies of democratic citizens, and on the other hand, of theorizing about democratic procedures without stipulating any educational content:

> Faced with the program of the efficiency school, they [liberal and democratic theorists] have continued to agonize about the boundaries between school, state, and families rather than focusing on the substance of the educational curriculum.... They have devised ever more sophisticated strategies for delineating public and private spheres of power.... The result has been a chorus of "thou shall not"—to the family, the state, the teacher—but very little on "thou shalt".... Silence on this issue [what should be taught] has left the field to the celebrants of the market and the eulogizers of the family. (pp. 23-25)

To secure a place for continuous inquiry on this contested field, Steiner enlists the aid of three itinerant thinkers, Protagoras of Abdera and Athens, Rousseau of Geneva and Paris, and Dewey of Burlington, Baltimore, Ann Arbor, Minneapolis, Chicago, and New York. From texts by these three, Steiner derives support for his theory about the tensions implicit in democracy and education's role in integrating and harmonizing the needs of individuals and society.

The Sophists' Conception of "Man, the Measure of All Things"

According to Steiner, the Sophists were the first to espouse a triadic relationship between philosophy, democracy, and education. Out of philosophical disquisition, principles of right action were derived; from

examining how successful democratic city-states operated, the importance of persuading citizens to give their consent freely was established; and by offering instruction in rhetoric to future political leaders, the connection between the arts of language and the rules of governance was clarified. Sophists saw their role as teachers as setting forth principles against which students could measure the extent of their learning. Specifically, a politician educated in the art of rhetoric could measure his success by the degree to which he had persuaded others freely to accept as their own preferred understanding what he, the speaker, considered the best course of action.

From speeches attributed to Sophist teachers in several Platonic dialogues (the *Euthydemus*, *Gorgias*, *Protagoras*, *Sophist*, and *Theaetetus*), Steiner is able to justify why their conception of "man, the measure of all things" is still relevant to an ideal model of democratic education:[5]

- In a democracy, there is a live connection between rhetoric and action.
- Persuasion through rhetoric (as opposed to force) is the mechanism through which the private self is engaged to assume a civic identity.
- Participation in civic life brings about a remeasurement of individuals' opinions.
- Language is the tool by which citizens measure themselves and their polity.
- Arguments and argumentation reveal the constraints and possibilities of civic life.
- An education in rhetoric equips citizens with the skill to judge between competing conceptions of the good life.

Rousseau on Restraint and Teaching

When Steiner moves on to Rousseau, he has the advantage of consulting a vast quantity of writings, a very different situation from the fragments of the Sophists that have survived. Not only are Rousseau's writings voluminous, spanning a variety of genres, but a great deal of his work is concerned with a topic central not only to Steiner's project but to all theorizing about politics: "How are people to retain their autonomy once they submit to the authority of others?"[6]

Steiner believes that "Rousseau exemplifies in forceful ways Protagoras's dictum to become the man of measure" (p. 60), later raising that opinion to the superlative: "(perhaps the) most powerful exemplar of a self-measured life" (p. 119). In the myriad episodes in which Rousseau recounts his obsessive search for the well-springs of action, Steiner espies agreement with Protagoras' view: measurer, unit of measure, and field being measured are always in dynamic interrelation. However, in Rous-

seau's case, there is ample evidence that the whole process of self-judgment as a basis for measuring society may ultimately prove to be incoherent. The always imminent collapse of self-examination as a basis for democracy in his texts may be due to Rousseau's extending the Greek concern with measurement beyond grammatical and logical categories to a plethora of new sites, notably geography (emerging republics in Europe), biology (the role of instinct), and psychology (the appeal of eroticism).

Rousseau's acceptance of antinomies (Steiner names individual/collective, solitude/community, nature/civilization) led him to posit a composite human being: Private egotist and public actor. Society's need to protect itself against individuals' selfish instincts and self-love requires it to provide instruction in self-discipline to the young. If children were not taught to curb their vanity and their passion, they would face two, equally unacceptable choices: either complete isolation or complete effacement by submersion into the collective will.

In *Emile*, Rousseau describes the educator's role as installing internal limits in such a way that to the pupil they seem self-willed. These limits organize our capacity to measure and modify our environment. Without the capacity to restrain our desires, we could have no experience of freedom. Only when personal efforts are in harmony with and accomplish public ends can a polity be said to be truly self-governing. The education of restraint and limits that Rousseau called for equips citizens with the capacity to govern themselves. Though self-rule does require continuous monitoring, teachers should relinquish their authority as soon as pupils demonstrate their understanding of and unforced consent to the will of the collective.

Dewey on Continuity and Language

Since many of Dewey's ideas will be familiar to professors of social foundations, I will concentrate instead on the uses to which Steiner puts Dewey's ideas in constructing a model of democratic education. Having shown Rousseau's worldview as an unsteady embracing of drives that move in opposite directions (one toward solipsism, the other toward effacement), Steiner finds in Dewey's emphasis on continuity a way out of the Manichean, ultimately pessimistic vision of Rousseau. In Dewey's optimistic, quintessentially American outlook, polarities that so troubled Rousseau (*e.g.*, self and society, freedom and duty) are seen as continuous, existing in dynamic equilibrium. Amidst this continuity lie potentialities for reordering relations between organism and environment. Of most interest to Steiner and Dewey is the potential within democratic

forms of association to continuously reconstruct individual and social practices. From a close reading of *Democracy and Education*, Steiner extracts Dewey's requisite conditions for a democratic society (unimpeded communication, wide stimulation, equitably distributed interests) in order to argue that the function of education in such a society is to prepare citizens to "engage in the constant reconstruction of the public sphere" (p. 129).

An emphasis on the reflective transformation of social habits and political structures is of course explicit in Dewey's work, and Steiner doesn't claim he has found something no one else has noticed. What is perhaps more organically related to the thrust of his book is his revisiting Dewey's remarks on the role of language in securing democracy. Recall that the Sophists were primarily concerned with the power of language to persuade and deceive. Dewey's interest in language is deeper and broader. From a pragmatist perspective, Dewey credits language as the basis for all communication, and facilitator of all group interaction. His is a combined socio-cultural and linguistic outlook: Language enables humans to organize into associations and also liberates individual speakers from specific episodes, allowing them to yoke together past, present, and future. More important than this instrumental aspect of language is the developing awareness of and attention by speakers to the connection between language and meaning, especially tacitly accepted social meanings in concepts like democracy and education.

Steiner's interpretation of Dewey's pragmatist account of language is a fine example of his assisting readers to attain a coherent view of a philosopher's line of thought which appears systematic only when texts, widely spaced throughout a long career, are brought together to advance a commentator's argument. Summarizing many pages of tightly-woven, commented-on citations, I encapsulate Steiner's gloss on Dewey's theory of meaning:

- Meaning is a relational statement between humans and their context.
- It represents an effort to restore continuity between experience and nature.
- Meaning carries the potential consequences of action.
- Choice of action is based on an understanding of past and future.
- Action should result in the harmonizing of competing tendencies.

Steiner makes many other linkages to Dewey's ideas about language—to the formation and reformation of habit, to the generation of hypotheses, to the disposition toward deliberation—but these connections are likely to be familiar to most educators. Readers will come away

from these two chapters on Dewey with a keener appreciation of how Dewey's interrogation of language use was the ground for more familiar concepts that we associate with him, in particular, experimentation as engine of growth and reconstruction of community.

In concluding this discussion of crucial ideas in Protagoras, Rousseau, and Dewey which Steiner claims are the basis for his reconceptualization of democratic education, I draw readers' attention to Figure 1 (page 18). In this matrix, I have schematized Steiner's use of these three thinkers along four dimensions: their model of democracy, their theory of governance, the role they assign to language, and the content they stipulate for education. The propositions in the cells are of course crude summaries of highly complex arguments, but I believe they distill the continuities Steiner has located in his sources (disregarding their disagreements) in support of his goal of grounding a theory of democratic education in language, experience, and growth.

Steiner's Curricular Proposals

The curricular proposals put forward in the last chapter are supposed to be the means by which the ends of democratic education which Steiner has located in the writings of the Sophists, Rousseau, and Dewey, might come closer to realization than if reformers were to continue tinkering with the sequence and standards of traditional courses. The governing idea behind these proposed changes is that, were enacted, they would constitute an education better able to equip students (future citizens) with the capacity to measure themselves and their society:

- Move the traditional core courses (English, math, science, and history) to the periphery.
- In their place, install a new core, comprised of courses in rhetoric, performance, political economy, and the body in multiple contexts.
- In rhetoric courses, students would dissect competing claims of legitimacy through case study and group analysis of imagery, metaphor, cadence, and syntax.
- In performance classes, students would have opportunities to create and stage works of drama, music, dance, recitation (poetry, speeches, orations).
- In political economy classes, students would study such topics as markets, ideology, technology, and employment through community projects.
- In classes devoted to the body in multiple contexts, students would study such topics as sports, fashion, and sexuality.

In the second part of this review, I will not offer a judgment about either the logical connection between the curricular modification just

Figure 1

Steiner's Three Pillars of Rethinking Democratic Education:
Democracy Precariously Balances Competing Claims of Autonomy and Solidarity as Education Integrates and Harmonizes the Needs of Individuals and Society

	Protagoras	Rousseau	Dewey
Model of Democracy	◆ Participation in civic life brings about a remeasurement of individuals' opinions. ◆ Through participation, the private self is engaged to assume a civic identity.	◆ Pursuit of private interests forces all into mutual dependence. ◆ Public life frees citizens from the incentive to take advantage of one another.	◆ Self and society are in dynamic equilibrium. ◆ Nurturing the capacity to inquire systematically and continuously allows human beings to contribute to the shaping of public meanings.
Theory of Governance	◆ Training of political leaders in rhetoric provides the means by which citizens can be persuaded to accept as their own understanding what the speaker considers the best course of action.	◆ Survival of the polity depends on persuading everyone to accept willingly that civic duty takes precedence over self-love. ◆ Citizens are led to suppress their private egotism under the force of historical necessity.	◆ Citizens engage in constant reconstruction of the public sphere, imagining possible outcomes to alternate courses of action. ◆ Free exchange of ideas liberates our capacity to cultivate meaning from experience.
Role of Language	◆ Language is the tool by which citizens measure themselves and their polity. ◆ Arguments and argumentation reveal the constraints and possibilities of civic life.	◆ Language enables us to assume multiple perspectives within our segmented personalities and across persons. ◆ Vociferous debate, however, indicates recrudescence of private interests and decline of the State.	◆ Language is the basis for our associating in groups. ◆ Language enables human beings to move beyond specific instances and yoke together past and future. ◆ Unimpeded, freely circulating communication is a prerequisite for democratic society.
Content of Education	◆ Training in rhetoric equips citizens with skills to judge between competing conceptions of the good life.	◆ During stage of physical and psychological weakness (ages 0-15), children must be tutored individually (to astute self-awareness) so that they learn to restrain their desires.	◆ Learning occurs when we attempt to alter our environment. ◆ End-in-view of schooling "is the development of a spirit of social cooperation and community life."

enumerated and the ends they are intended to achieve or the prospects of their being taken seriously by anyone outside the community of political theorists. Instead I will focus on the extent to which the model takes into account current conditions in schools. Because I conclude that neither the model nor its concrete proposals address a large number of issues that challenge education today, I will offer as a comparison the vision of Beyer, whose grasp of democratic theory and curriculum renewal seems to me a surer guide to reconstructing public education.

Part 2: Assessing The Usefulness of Steiner's Model of Democratic Education

The Emphasis on Intellectual Competence

Let's start with the last of Steiner's curricular proposals—a course of study on the body in multiple contexts. It seems symptomatic of Steiner's highly mentalistic account of high school, that, as in Rousseau, such a course would subject adolescents to absorbing society's construction of them for the express purpose of restraining their erotic expressiveness. Given how cerebral the other three subjects are, I fully expected a course named "the body" would be devoted to wellness and exercise. Why shouldn't these high schoolers be outside on playing fields, learning about physical conditioning and testing their endurance?

Steiner's valorizing of displays of intellectual competence reaches its zenith in a formal national examination he proposes in which students completing these four courses would have to demonstrate their "basic grasp of the critical issues in the national agenda" (p. 206). Here is one example of the kinds of questions that a graduating high school senior would be expected to answer:

> Who should determine the amount of federal funds given to subsidize individual or group activities in the field of scientific research, artistic activity, and education? What criteria should the deciding agents use in their decisions? [This type of question asks the candidate to evaluate competing demands for public aid and to examine the relationship between the value of private pursuits and their contribution to the common domain.]

For the moment these questions are more in the nature of a thought experiment than an actual submission to a testing agency. But I want to make two points about Steiner's proposed measuring device. One is that his whole emphasis on demonstrating discursive understanding is completely at odds with an emergent, media-saturated culture that depends on persuasion through manipulation of images and sound. Two, more

concretely, it suggests no familiarity with the degree to which adolescents (not to mention large portions of the general population) have already significantly disengaged from attempting to master written forms of communication which they regard as time consuming, one-dimensional, and ultimately unconvincing. What this uninterest in logical argumentation bodes for the future of democracy I cannot envisage, but it is certainly short-sighted not to notice that reliance on discursive reasoning is fast disappearing from our social institutions.

I think that Steiner's concentration on strengthening the mental acuity of future citizens has constricted his vision of what is happening in American schools. Numerous strains not centered in the competencies of students go unremarked. I refer to such issues as the deskilling of teachers, the consolidation of parental involvement into single-interest constituencies, and the controversy-avoidance tactics of school district and state education officials. Though I admire the skill with which Steiner marshalled his sources to support his conception of democratic education as taking the measure of self and society, I ended my reading of the book not comfortable with what, viewed from a distance, appears to be primarily an epistemological, rather than a moral, account of citizen formation, one that borders perilously close to narcissism. Perhaps it was my discomfort with his post-structuralist-imbued vision of perpetual uncertainty about being able to balance internal and external sources of authority that made me turn immediately to the work of Beyer for a more principled and communitarian vision of citizen formation.

The Primacy of Value over Knowledge

It may seem obtuse to end a book review by citing the work of another author. My aim in adducing Beyer's work here is not to stage a point-by-point comparison, and then declare one writer winner of the match. Rather, I want to alert readers who intend to engage the arguments and proposals in Steiner's book that there is another account which, while covering much of the same terrain, takes a different journey and comes to rest at a different place.

Beyer, following Benjamin Barber, distinguishes between the classical liberal theory of democracy with its emphasis on the rights of individuals to pursue their inclinations, protected from intrusions by others and the state into their personal affairs, and a participatory democracy (termed "strong" by Barber) with its emphasis on collective action and the responsibility of society to redress the inequities brought about by free-market economics.[7] Leaving no doubt which vision he supports, Beyer argues that facilitating cooperation between individuals

is more likely to right societal wrongs than the classical liberal faith in a set of balanced elites elected to represent sectional interests. Participatory democracy's emphasis on ethical action is attractive because it holds out the possibility for individuals to integrate their psychological and social needs.[8] The focal point for these actions is the building (and restoring) of community. Beyer once again distinguishes between the classical liberal conception of community, "a collection of self-interested individuals who are committed to the rational enunciation and attainment of their own interests" and a "progressive" interpretation which seeks to promote "the development of the sort of solidarity that encourages and values difference while making collective action possible."[9]

When participatory democracy is transferred to the educational sphere, it translates most saliently into non-hierarchical decision-making processes. Only by fostering collaboratively-undertaken action committed to achieving egalitarian ends can we hope to reduce the fragmentation and stratification all too visible in today's schools.[10] Beyer's writings may be a little shy on examples of how participatory democracy would actually work within the classroom and throughout the school, but fortunately there are now a plethora of reports by school leaders and researchers spelling out what happens when the educational workplace is organized around and operates with democratic values.[11]

At the risk of seeming overly didactic and stubbornly dualistic, I again provide a figure for readers, this time summarizing the chief divergences in liberal and communitarian writers' conceptualization of citizen formation. The matrix in Figure 2 (page 22) is derived from three sources, one an overlooked work published 11 years ago and two new books that came out just last year. All three make astute distinctions between these two basic orientations to theorizing about democracy and education.

Though very likely he would not agree, it seems to me that the amalgam Steiner forged out of the Sophists' "man, the measure of all things," Rousseau's precarious internalization of the collective will, and Dewey's faith in continuity and communication falls rather squarely within the liberal, neo-Kantian tradition. When he shows us the kinds of competencies that he expects will assist future citizens in upholding the democratic ideal, they certainly appear to buttress the capacity of individuals to rationally justify their preferences. How different Beyer's communitarian view is! In his espousal of that position, the interpersonal stands prior to the personal, midway between and leaning in the direction of the communal. Read both authors and whichever version of democracy you value, take action to secure it, for this "mode of associated living"[12] is gradually disappearing.

Figure 2

Liberal and Communitarian Conceptualizations of Citizen Formation

	Liberal (Neo-Kantian)	Communitarian (Neo-Pragmatist)
Philosophical Orientation	Epistemological (knowledge).	Ethical (action).
Purpose of Democracy	Protect individuals' rights to pursue their inclinations and satisfy their desires.	Act collectively to redress inequities brought about by free-market economics.
Theory of Governance	Balancing of elites who represent sectional interests.	Facilitating cooperation to mitigate conflict and right societal wrongs.
Methodology	Rational enunciation and justification of a priori principles that underwrite pursuit of personal fulfillment.	Encouragement of diversity and reliance on consensus-building.
View of Agency	Perpetual uncertainty about the possibility of individuals and groups balancing internal and external sources of authority.	Involvement in building community contains potential for integrating individual and societal needs.
Imprint on Education	Curriculum valorizes discursive reasoning and displays of fluency.	Curriculum emphasizes experimentation and non-hierarchical decision-making.
Exemplary Text	Amy Gutmann, *Democratic Education.*	Landon Beyer, *Knowing and Acting.*

Sources: Richard M. Battistoni, *Public Schooling and the Education of Democratic Citizens* (1985); Elizabeth A. Kelly, *Education, Democracy, and Public Knowledge*; David C. Paris, *Ideology and Educational Reform: Themes and Theories in Public Education* (1995).

Notes

1. Steiner clarifies in a footnote what he means by reciting this civics class slogan, namely, that "the American constitution in its entirety is subject to unlimited popular revision" (p. 213). Anyone who has sought permission to circulate a petition, let alone get an amendment on to a state or national ballot, might not agree that revision of our laws is "unlimited."
2. One could also argue that skeptical questioning of society's basic assumptions is built into the developmental sequence of the young who carry within them the utopian longings of a new generation loathe to compromise and that the work of schools is actually to foster acceptance of dissensus and instability.
3. This list bears the unmistakable imprint of reading post-structuralist thinkers such as Foucault and Derrida, both of whom make evanescent appearances in Steiner's text. Neither writer is discussed directly (Derrida appears as a astute commentator on Rousseau's literary/psychological evasiveness and Foucault as a closet Deweyan). Nonetheless, the elevation of a constantly permutating identity to the acme of the educative process and the assertion that no Archimedean point exists to anchor judgment indicates the extent to which Steiner has in fact rethought democratic education, in particular, his appropriation of a major poststructuralist aperçu, that all philosophical and social-psychological constructs are radically unstable and infinitely deferring.
4. Steiner is most familiar with critics of a neoconservative bent, such as James Q. Wilson, Chester Finn, William Bennett, and Diane Ravitch; he refers to them collectively as the "efficiency school" (p. 26).
5. The Greeks' exclusion of women from citizenship and how that affects our response to their conceptions of democracy is a topic on which Steiner is silent. Needless to say, others are not. See, *e.g.*, Nicole Loraux, *The Children of Athena: Athenian Ideas about Citizenship and the Division between the Sexes* (Princeton, NJ: Princeton University Press, 1993); Sue Blundell, *Women in Ancient Greece* (Cambridge, MA: Harvard University Press, 1995).
6. This formulation of "the fundamental problem of politics" is taken from Emily Hauptmann, "A Review of Zev M. Trachtenberg, *Making Citizens: Rousseau's Political Theory of Culture* (1993)," *American Political Science Review* 89 (1995): 754.
7. Landon E. Beyer, "The Social And Educational Conditions For Democracy," *Journal of Curriculum and Supervision* 4 (1988): 178-186.
8. Landon E. Beyer, "The Aims of Schooling: Marketization, Democracy, and the Public Good," *Educational Foundations* 8/4 (1994): 43-58.
9. Beyer, "The Aims of Schooling," 48.
10. Landon E. Beyer, "Can Schools Further Democratic Practices," *Theory Into Practice* 27 (1988): 262-269.
11. Some recent works in this area are: Michael W. Apple & James A. Beane, eds., *Democratic Schools* (Alexandria, VA: Association for Supervision and Cur-

riculum Development, 1995); Darol Bussler, "The Democratic Class: Social Infrastructure Developing Social Architects," *Teacher Education Quarterly* 21/4 (1994): 23-46; Susan Seigel & Virginia Rockwood, "Democratic Education, Student Empowerment, and Community Service: Theory and Practice," *Equity and Excellence in Education* 26/2 (1993): 65-70.

12. John Dewey, *The Middle Works, 1899-1924, Vol. 9:1916,* ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 1980), 93.

Education and the Pursuit of Happiness: John Dewey's Sympathetic Character

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Introduction

This paper attempts to clarify the meaning of the pursuit of happiness in a democratic society and the role of education in that pursuit. Conceptually the paper builds upon the ethics of Aristotle and John Dewey in emphasizing the importance of education in preparing students to lead individual and socially responsible lives. This challenges the belief that education is the key material to well-being and the good life in American society. The paper discusses Dewey's notion of sympathetic character in light of the ethical pursuit of happiness so fundamental to democratic community.

Happiness can be described in many ways, such as a state of well-being, characterized by luck or good fortune. How does one reach this state of well-being or happiness and how does it relate to the good life? What constitutes the good or the good life and how we reach such a state has intrigued philosophers, both East and West, since the dawn of time.

"Good" can be used as a noun or an adjective. As a noun, it tends to pertain to a characteristic of the good, conforming to some type of quality such as prosperity, health, utility, or usefulness. Used as an adjective, it might describe numerous conditions such as bountiful, fertile, handsome, attractive, profitable, agreeable, pleasant, kind, competent, and skillful. The concept of good implies some kind of act by which one embodies one or several of these characteristics. To be good means conforming to some kind of standard; it is process, a means to end. Yet,

this process is value laden.

In American society the good life is largely conceived in a material, economic context. Webster's latest dictionary clearly defines the good life in terms of attaining wealth and fame. Does attaining wealth and fame equate itself with the good life? Not necessarily. Dewey argues that in a democratic society achieving the good life must be undergirded with ethical responsibility. Achieving the good life in American society, being materially successful finds itself linked with a perceived end state of happiness. Education is perceived in our society as the primary means by which one can attain this perceived end state of happiness.[1] Exploring the conceptual essence of happiness and its ethical nature can be better understood by briefly investigating classical realism, utilitarianism, and pragmatism. Such an understanding can help us illuminate what it means to pursue happiness in a democratic society. This investigation can illuminate the role of education in clarifying the link between education and the ethical pursuit of happiness.

Aristotle and Dewey agree on the ethical pursuit of happiness. Our current conception of the pursuit of happiness has strayed from Thomas Jefferson's view, and this deviation has limited the formation of democratic community. Viewing education in a strict materialist sense, such as for job acquisition or occupational attainment, potentially undermines the role of education in a democratic society, leading to further distortion in terms of what it means to pursue happiness. This materialist view underlies the thrust of current American educational reform and has tended to be a major theme throughout the history of American education since the common school era.[2]

Conceptualizing Happiness

When we state "I am happy," we tend to speak of a state of pleasure, joy, or good fortune, but this state of happiness tends to be momentary and we perceive it as such. This happiness "quick fix" has the potential to undermine the ethical pursuit of happiness. The problem with the contemporary use of the word happy and the state it describes is that it is couched in material terms. For example, many think of good fortune or contentment possible only from the attainment of material things. Many see happiness in linear fashion. The more we consume, the happier we are, and the more successful we will appear to ourselves and to others. Desire in our society catapults wants over needs. Dewey contended while desire might consist of a strong wish for personal enjoyment or pleasure, it must be conditioned within the social context, essentially held together by some form of ethical association.[3]

We are bombarded daily with thousands of messages that inform us that to reach a state of happiness we must consume. This logic of consumerism is couched in slogans such as "just do it," "go for the gusto," or "do your own thing." Underlying this logic is convincing the consumer to act without regard or concern for the consequences. This is desire, but desire strictly as an end. This type of desire has enormous consequences for society at large, potentially affecting individual self-realization, social interaction, self-esteem, the environment, and possibly world peace. It strays from the concept of happiness discussed by Aristotle in the *Nichomachean Ethics,* Jefferson in the *Declaration of Independence,* and Dewey and James Tufts in *Ethics*. While Aristotle forms the foundation for the Jeffersonian concept of happiness, Jefferson and Dewey more adequately articulate it in terms of democratic society.

Educators perpetuate the belief that educational success will lead to material success in American society, moving us to an eventual state of happiness and the good life. This is perpetuated by myths such as that hard work, good grades, good behavior, and respect for authority will bring success in school and somehow that this is linked with the good life.[4] Some critics refer to this belief as an achievement ideology.[5] The achievement ideology fosters the belief that education is a meritocratic tool whereby one achieves and is rewarded based upon individual merit or talent rather than race, class, gender, or ethnicity. School success in terms of academic achievement is readily linked with occupational attainment leading to the good life, yet social science research informs us this is a weak link at best.

Such a link exhibits a form of techno-rationalization characteristic of the administrative progressives and the proponents of scientific management and efficiency.[6] Relying on supply-side economics, it stresses a linear relationship between the amount of education and earnings and the good life. While this relationship is causal to some degree, it is tenuous because it ignores the innate complexity of the global capitalist marketplace.[7]

The materialist message of educational success leading to economic dominance in a world marketplace characterizes the national push for reform in education. Politically and economically expedient, this type of reform will not benefit education or American society in creating the common good. Much of the reform debate is built upon the faith held by Americans in education as a panacea and ladder to the good life.[8] Educational reform discourse is safe politically, but to truly understand reform we must consider discourse beyond simple communication and investigate the issue of who speaks of reform, why they speak, when they speak, and with what authority.[9] The most influential reform efforts have been

written by politicians and business leaders rather than educators. Simply linking educational reform to economic prowess, with increased measures of accountability, again ignores the extreme complexity of the capitalist marketplace, now more strongly characterized by world corporate control than by nation states.

Futurists and social psychologists claim our current pursuit of happiness is futile and failing. Consumption forms the basis of United States economic policy, and most other nations of the world follow suit. This belief guides educational policy and reform worldwide. According to several studies, the main determinants of happiness are satisfaction with personal relationships, generally characterized by family life, leisure, work, and friendships.[10]

International cross-studies of life satisfaction show that richer countries are not necessarily happier than poorer ones, often indicating no positive or negative relation between income and happiness. Amatai Etzioni, in *The Spirit of Community*, suggests that once basic needs are met, then chasing wealth will not bring happiness. He suggests our time be better spent invested in building and strengthening the community.[11] These findings do not surprise those familiar with the ethics of Aristotle or Dewey. If the hedonistic treadmill will not lead us to happiness, then what will? Can philosophy play a role in clarifying what it means to pursue happiness? Do educators have a role to play? Briefly viewing Aristotle's *Nicomachean Ethics* can shed light on what is meant by the ethical pursuit of happiness.

Aristotle and the Pursuit of Happiness

Aristotle used the Greek word *eudaimonia* to conceptualize happiness, and viewed it in terms of the life one should lead or the good life. For Aristotle, happiness consisted of one good and that was the pursuit of virtue, guided by the use of reason.[12] *Eudaimonia* perceives happiness at the end of human nature, its pursuit a distinctly human quality; a noble pursuit of knowledge, purpose, and choice. Aristotle did not visualize happiness as the singular pursuit of pleasure or simple enjoyment.[13] For Aristotle, this pursuit takes place in the form of *praxis*, man shaping himself in a rational manner. The Greek word *praxis* indicates some type of motion or change in the personal sense of "I do" or "I make."[14] This is important in viewing the pursuit of happiness as ethical activity. *Praxis* associated with *eudaimonia* is self-caused ethical actuality. "I act" is guided by knowledge and reason for the right reason.[15]

For Aristotle, a happy man need not have many possessions, but enough for sustenance. For Aristotle, these included enough wealth,

honor, love of friends and family, a decent amount of pleasure, knowledge, and especially wisdom and health.[16] For Aristotle, education provided the formal process for leading the future citizen to a life of virtue for the polis was not possible otherwise.

For Aristotle, the pursuit of happiness is not egotistic or the desire for extremes in pleasure or pain.[17] It is a life of moderation, characterized by virtue, guided by reason. Aristotle linked education with virtue, where one learns to pursue happiness within the confines of the good of the community as a whole; only then will the society become truly just. The Greek perception of education embodies the whole community, both public and private, and society considered it an important responsibility to educate.

Utilitarianism and the Pursuit of Happiness

The utilitarians, chiefly represented by Jeremy Bentham and John Stuart Mill, defined happiness in quantitative and qualitative terms. Bentham called for the greatest happiness for the greatest number, a surplus of pleasure over pain; thus the proper end of moral action was to bring happiness to as many people as possible. For Bentham, the good life could be ascertained by calculating the plus values of pleasure, minus the values of pain. He believed that man by nature was selfish and actively sought pleasure and the avoidance of pain. If man is inherently selfish, can he properly conceive the common good? Bentham realized this dilemma and believed that if people established the proper form of government then they could be induced to behave in a way to foster the greater social happiness.[18]

Mill also speaks of the morality of an act being determined by the contributions of the greatest happiness for the greatest number, yet Mill extends this into a qualitative framework. Mill claims the pleasures of the cultivated life are more valuable than those of the uncultivated. This gives Mill's utilitarianism an aristocratic twist, as he attempts to synthesize hedonism and self-realization. Both Bentham and Mill would claim the right or virtuous act is determined by the best results or the good consequences. These consequences are linked to the end of happiness and that happiness (or the pursuit thereof) is based upon how each individual conceives it. The problem with this "pursuit of happiness" is that there is no guidance, no valid test of right or wrong, other than the best results. Dewey criticized the utilitarians for absolving the acting agent of responsibility for action "for unforeseen and unintended consequences focusing on judgement and foresight."[19] For Dewey, the ethical nature of democracy requires some guideline or standard be used for

distinguishing the right kind of pursuit of happiness; otherwise we have rampant individualism.[20]

Dewey and the Pursuit of Happiness

Dewey believed neither Mill nor Bentham could provide a standard for guiding the ethical pursuit of happiness. Happiness as a conceived good in itself could not serve as an ethical standard. For Dewey, the good perceived in a material context presented a danger to democratic community. He challenged both the utilitarian and Kantian perceptions of moral conduct in attempting to point out the shortcomings of both, forming an ethic of self realization "in which both happiness and the dictates of practical reason (phronesis) call for the cultivation of democratic character."[21] Dewey did not wish the individual to act in terms of unforeseen consequences (Mill or Bentham) or through universal law or maxim (Kant), but to act based upon a choice between competing values. For Dewey, one considers the consequences of the choice before acting, what he called social intelligence. For Dewey, the utilitarian mistakenly linked the pursuit of happiness to individual ends. Dewey does not negate the right of the individual to choose and pursue happiness, but conditions that pursuit by its social implications, guided by ethics. For Dewey, the moral person regards the capacities and habit of the self in making decisions with the social viewpoint in mind.[22] The moral individual for Dewey acts with the social good in mind, with regard for the consequences of action on pursuit of happiness by others. This forms the basis for his ideal of a moral democracy.

Dewey refers to this type of individual being characterized by a sympathetic character. For Dewey, character sustained the rational and the common good through proper habits and virtues. He defined virtue "either as the settled intelligent identification of an agent's capacity with some aspect of the reasonable or common happiness; or as a social custom or tendency organized into a personal habit of valuation."[23] Borrowing from Aristotle, Dewey speaks of the virtues of temperance, courage, justice, and conscientiousness, or making a judgement.[24]

The Greeks viewed temperance balanced with desire and intelligence. "It implied an aesthetic view of character; of harmony in structure and rhythm in action."[25] Through Roman and later Christian influence, temperance became defined as a type of self-control, restraint, or inhibition. Dewey views temperance as a control of passion and appetites in the interest of larger values at stake, essentially those of the society at large. Courage is the next virtue addressed by Dewey. The Greeks sought to distinguish courage from that of reckless character. It was good will in

the sense that it was done in support of the whole or common good.[26] Dewey further defined courage as constancy, loyalty, faithfulness, fortitude, patience, and perseverance. He perceived courage as a willingness to face painful obstacles in the pursuit of the common good. The next virtues—justice and consciousness—are related in the sense that fairness, impartiality, and honesty condition and help one make deliberate judgement. One is just when one takes into consideration the whole of a situation characterized by the acts of equity, fairness, impartiality, and honesty.[27]

> The individual's intelligent concern for the good is implied in his sincerity, his faithfulness and his integrity. Of all the habits which constitute the character of an individual, the habit of judging a moral situation is the most important, for this is the key to the direction and to the remaking of all other habits.[28]

For Dewey, making a intelligent judgement is crucial and the key to the forming and reforming of habits, enhancing the solidarity of the community and the pursuit of the common good. Education for Dewey is the process whereby one begins to engage in making intelligent judgements. For Dewey, ethical people act together to secure the greatest degree of happiness.[29] The utilitarian seeks to act as an individual rather than in cooperation. Dewey claims making an intelligent judgement and the reconstruction of habits is based upon a type of thoughtfulness of self as well as the other; the two cannot be separated as in the utilitarian sense.

Dewey identified wisdom as the nurse of all virtues, for it incorporates intelligence with virtue. The problem with the modern notion of wisdom (masked as knowledge) is that it suggests a cognitive activity separated from moral reasoning and virtue. Knowledge today suggests the accumulation of facts or other types of information. It need not deal with the application of that information. While the Greeks viewed knowledge in a more personal, moral sense in concert with reality, our modern view gives knowledge a remoteness from reality. Clearly, this concern moves Dewey to criticize the traditional use of subject matter as separate from reality in his critique of epistemology. Traditionally, knowledge was approached as the accumulation of various forms of subject matter, yet here the problem is the failure to help the student become a "wise" or intelligent problem solver.[30]

Education plays a crucial role in developing this wise individual, one of sympathetic character. Sympathetic character is deeply embodied in the concepts of liberty, equality, and fraternity. Through experimentation, reflection, and inquiry, one can learn to reflect on choices rather

than acting on impulse or desire. Democratic character is sympathetic character, an ethical association. Furthermore, for Dewey, democratic society allows each member of society the freedom to reach individual potential, what he called equality of opportunity.

Conclusion

For Aristotle and Dewey, to live the good life the individual must make the right choices concerning needs and human wants, and it is moral virtue as a firm habit that disposes the individual to make such choices. "Life, liberty, knowledge, and friends, health and a modicum of wealth and other goods of fortune—all these are also real goods the possession of which is indispensable to a good human life."[31] The pursuit of happiness must become a habit guided by moral virtue as Dewey, Aristotle, and Jefferson articulate.

Jefferson's view of democracy might be described as "that institutional arrangement for arriving at political decisions which realizes the common good by making the people itself decide issues through the election of individuals who are to assemble to carry out its will."[32] Do politicians consider the common good when making decisions based upon the will of the people? Erich Fromm suggests in *The Sane Society* that elected officials, through associating in political parties, have become like commercial enterprises where they sell their wares to the public in a mode like that of a high pressure advertiser?[33] Fromm believed that happiness was perceived as no more than seeking pleasure and having fun. In his view, we are like babes at the breast continually suckling, refusing or never seeking to be weaned. Fromm's metaphor of suckling describes our rampant consumerism and our failure to concern ourselves with the consequences of such choices.

Education can play a prominent role in this reconceptualization of the ethical pursuit of happiness in democratic society. The achievement ideology must be disregarded as a myth. For many Americans, it simply fails, frustrates, and alienates. Robert Bellah states in *The Good Society* that "The idea of an education that simply gives individuals the methods and skills they need to get ahead in the world is almost certainly inadequate, yet we continue along this path."[34] Education for job training has lost its specificity and meaning with the rapid growth of technology and rapidly changing occupational structure. Schools simply cannot keep up with the advances in the technical training of personnel or the monetary resources necessary for technology. What we can do is to better prepare people to become analytical and reflective thinkers, moral and sensitive people who are capable of responsible decision making and ethical social

interaction. American society needs students (future citizens) of sympathetic character.

Democratic society needs intelligent problem solvers, not robots regurgitating facts. Yet, these problem solvers need to understand the ethical nature of democracy and its fragility if it is equated with the freedom to act and consume regardless of the consequences. Our current notion of happiness, where the individual acts typically for the enhancement of pleasure, is not guided by ethical principle conducive to democracy. This is not Aristotle's view of happiness, Jefferson's idea of the pursuit of happiness, or Dewey's vision of democracy as ethical association. Market forces, media distortion, and rampant individualism are undermining any attempt at establishing democratic community.[35]

In *Ethics*, Dewey quotes George Eliot's *Romola* to better define his conception of happiness in the social interest:

> We can only have the highest happiness such as goes along with being a great man by having wide thought and much feeling for the rest of the world as well as ourselves; and this sort of happiness often brings so much pain with it that we can only tell it from pain by its being what we would choose before everything else, because our souls see it is good.[36]

Dewey speaks of the ethical nature of the pursuit of happiness and the crucial role educators must play in providing a forum for reflective and critical thought. But this reflective thought is not simply sufficient by itself, for the student must also develop a sympathetic character, a feeling for the other and the importance of freely choosing and being responsible for choices. In Dewey's view of sympathetic character, "we should desire those objects and find our satisfactions in the things which also bring good to those with whom we are associated, in friendship, comradeship, citizenship, the pursuit of science, art, and so on."[37] We must broaden our notion of education to include both informal and formal aspects, beyond the narrow epistemological stress on factual knowledge; essentially knowledge that can be measured. Dewey asserted: "Education should create an interest in all persons in furthering the general good, so that they will find their own happiness realized in what they can do to improve the conditions of others."[38] Our goal as educators must be to help children deal with the changing and evolutionary nature of knowledge; how to find and sort through enormous amounts of information and make wise decisions using that information. This implies that students work within an environment of freedom, not constrained by the boundaries of what can be effectively measured, a type of epistemological rationalization. In the spirit of critical pragma-

tism, we must broaden the concept of what it means to know, not what it is to know the facts or truth.

Democracy finds itself at risk when social ethics become subordinate to private conceptions of morality and individuals pursue happiness regardless of the consequences. This type of individualism seems characteristic of contemporary American society and is perpetuated within the educational system. Such a value orientation subverts the concept of democracy as ethical association, making a mockery of justice which must take into consideration race, class, ethnicity, and gender in the pursuit of happiness and the good life.

Notes

1. Randal Collins, "Functional and Conflict Theories of Educational Stratification," *In School and Society*, Jeanne Ballantine, ed. (Mountain View, CA: California, 1989)
2. See Arthur Wirth, *Productive Work in Industry and Schools* (New York: University Press, 1983). Also see National Commission on Excellence in Education, *A Nation at Risk: The Imperative for Educational Reform* (Washington, DC: Government Printing Office, 1983) and United States Department of Education, *Goals 2000* (Washington, DC: Government Printing Office, 1991).
3. John Dewey, "Theory of Valuation," *The Later Works 1925-1953* (Carbondale, IL: Southern Illinois University), 196-202.
4. See John Gatto, *Dumbing Us Down* (Philadelphia, PA: New Society Publishers, 1992) for a contemporary discussion of the material aspects of education.
5. Jay Mcleod, *Ain't No Makin' It* (Boulder, CO: Westview, 1987), 7.
6. David Tyack, *The One Best System* (Cambridge, MA: Harvard University Press, 1974), 180.
7. Peter Easton & Steve Klees, "Conceptualizing the Role of Education in the Economy," In *Emergent Issues in Education*, edited by Robert Arnove (New York: State University of New York Press, 1992), 123-142. See also Christopher Jencks, *Inequality* (New York: Harper & Row, 1973) and Henry Giroux, *Ideology, Culture and Process of Schooling* (Philadelphia, PA: Temple University Press, 1981), 9.
8. Henry Perkinson, *The Imperfect Panacea: American Faith in Education 1865-1990* (New York: McGraw Hill, 1991).
9. Michel Foucault, *The Foucault Reader*, edited by Paul Rabinow (New York: Pantheon, 1984).
10. See Alan T. Durning, "Are We Happy Yet? How the Pursuit of Happiness is Failing," *The Futurist* 27 (1993), 20-24; David Gelman, "Counting Your Blessings?" *Newsweek* 121 (1993), 57; Sal Divita, "People Want Happiness but They Chase Pleasure," *Marketing News* 26 (1992), 11; and Robert Lane, "Does Money Buy Happiness?" *Current* 360 (1994), 27.

11. Amatai Etzioni, *The Spirit of Community* (New York: Crown, 1993), 124.
12. Richard Kraut, *Aristotle on the Human Good* (Princeton, NJ: Princeton University Press, 1989), 4. Virtue is an important concern of the public today, evident by William Bennett's *Book of Virtue* reaching the best seller list. Recent debate about family values also serves as an example of individual and social interest in what constitutes virtue.
13. Don Asselin, *Human Nature and Eudaimonia in Aristotle* (New York: Peter Lang, 1989), 100.
14. *Ibid.*, 97.
15. *Ibid.*, 98.
16. Kraut, *Aristotle,* 353.
17. Gavin Lawrence, "Aristotle and the Ideal Life," *The Philosophical Review* 102 (January 1993), 1-34.
18. Melvin Rader, *The Enduring Questions* (New York: Holt, Rinehart & Winston, 1969), 586. Essays by Jeremy Bentham and John Stuart Mill.
19. Robert Westbrook, *John Dewey and American Democracy* (New York: Cornell University Press, 1991), 154; Also see John Dewey & James Tufts, *Ethics* (New York: Henry Holt & Company, 1929), 247.
20. Argued in Robert Bellah's *The Good Society* (New York: Vintage, 1991) and Christopher Lasch, *The Minimal Self* (New York: W.W. Norton, 1984).
21. Westbrook, *John Dewey,* 153. For further elucidation of the concept of phronesis see Richard Bernstein, *Philosophical Profiles* (Philadelphia, PA: University of Pennsylvania Press, 1986), 55, 100 .
22. Ibid., 157; Also see Dewey & Tufts, *Ethics,* 284.
23. Dewey & Tufts, *Ethics*, 403. This list of virtues is as close as Dewey will ever come in supplying a definitive standard to guide moral action.
24. *Ibid.*
25. *Ibid*, 406.
26. *Ibid*, 411.
27. *Ibid*, 414.
28. *Ibid*, 418.
29. *Ibid*, 399-426.
30. John Dewey, *Experience and Education* (New York: Macmillan, 1971), 17.
31. Mortimer Adler, *Six Great Ideas* (New York: Collier-Macmillan, 1981), 242.
32. Joseph Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper Brothers, 1947), 250.
33. Erich Fromm, *The Sane Society, (New* York: Rinehart & Company, 1955), 187. Etzioni makes a similar argument in the discussion of political action committees in *The Spirit of Community*.
34. Bellah, *The Good Society,* 170.
35. Sam Stack, "Democracy and the Quest for Community," *Journal of Thought* 29 (3)(1994), 17-26.
36. Dewey & Tufts, *Ethics,* 301.
37. Dewey & Tufts, *Ethics, The Later Works 1925-1953* (Carbondale, IL: Southern Illinois University), 248.
38. *Ibid*, 243.

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Jefferson on Philosophy of Religion and Public Education

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Preliminary Remarks

> Here was buried Thomas Jefferson, author of the Declaration of American Independence, of the statute for religious freedom, and father of the University of Virginia.[1]

That Thomas Jefferson wanted to be known for these three specific achievements is attested by the fact that the above statement represents his self-chosen epitaph. Despite the references in the epitaph to religious freedom and higher education, it might be contended with some justification that he is relatively unknown for (1) his philosophy of religion and (2) the application of those principles in a theory of public education.[2] These two topics represent the focal point of the following remarks, which are directed toward the systematization or formalization (apparently not undertaken by Jefferson himself) of this aspect of his philosophy of education.[3]

The immediate context of this investigation is expressed in (1) an epitome of Jefferson's general attitudes toward philosophy, education, and philosophy of education, and (2) a review of his doctrine of methodological materialism. In a brief conclusion, attention is given primarily to some historical and contemporary ramifications of Jefferson's view of the role of religion in public education.

The specific purposes of this study can be distinguished as direct and indirect. The former include the following: (1) to portray Jefferson's

general attitude toward philosophy, education, and philosophy of education; (2) to analyze his philosophy of religion; and (3) to relate his stance on religious matters to his views on the role of religion in the American public schools. Attempting to fulfill these goals entails the pursuit of the following in an indirect fashion: (1) to promote an awareness of the historical development of the role of religion in American public education; (2) to provide an account of a dimension of the history of American philosophy of education; and (3) to exemplify the nature and importance of philosophy of education.

I—Introduction: General Attitude toward Philosophy, Education, and Philosophy of Education

As already indicated, Jefferson's philosophy of religion and educational theory must be appreciated as an aspect of his philosophy of education, an understanding of which may be enhanced by brief, prior attention to his attitudes toward philosophy and education somewhat independently of one another.

Jefferson's attitude toward, and approach to, philosophy appears to be foreshadowed and suggested by his paradoxical temperament. His outlook on life may be characterized to a large extent in terms of such paradoxes as his innovative and experimental inclinations combined with a reverence for tradition and an adherence to clear-cut orthodoxies; his democratic convictions combined with his recognition of a need for excellence through the cultivation of an aristocratic elite founded on talents and virtues; his emphasis on theory combined with an immersion in various utilitarian concerns; his aesthetic interests combined with scientific preoccupations; and his intense love of rural quietude and simplicity combined with an insatiable zest for the work of the world.[4]

These paradoxes characterizing Jefferson's approach to life contributed to the development of his central aim in intellectual matters: to reconcile "his most valued philosophical beliefs and his great personal and ethical ideal of divine and human benevolence" or (in reverse order) "'essential' Christianity with the most advanced scientific and social philosophy."[5] The sources of his outlook include the Greek and Roman classics, Scottish intuitionist philosophy, and "essential Christianity," on one hand, and positivism, on the other hand.[6] These variegated sources of his thought seem to reflect his paradoxical temperament, his personal history (in America and in France), and his intense struggle to ground morality in an empirical framework. The result of his uses of

these sources is a kind of philosophy that previewed a central feature of American intellectual life extant for many years after his death, perhaps even to the present time.

While Jefferson certainly will never be known among the great philosophers in history, a fact which students of Jeffersonian thought might tend to overlook is his desire that people pay attention to the philosophical dimension of his nature,[7] as well as what he did accomplish in this arena. Furthermore, his ventures into the realm of philosophy represent a vital feature of the corpus of his recorded thought.[8] He provided direct clues to the scope and direction of his philosophical interests through his efforts in classifying fields of knowledge as a basis for his library catalogue and for the "General School" curriculum, the latter a program of studies for educated people.[9]

A consideration of what "philosophy" meant to Jefferson can be introduced by clarifying the fact that it did not include metaphysics.[10] For example, he refers to "schismatizing followers" of Jesus who perverted the simple doctrines he taught by "'engrafting on them the mysticism of a Grecian sophist [Plato]....'"[11] As indicated above, Jefferson's practicality must be appreciated in terms of his inclination toward speculation; the two are related integrally in his view of the nature and function of philosophy. His fundamental need was for a philosophy that reasonably grounded assumptions for human action. Philosophy to him was a kind of thinking which explained the foundations of human activity insofar as that was possible.[12] This fact points to the reason why he is considered primarily a social and political philosopher.

Until his profession of ideology late in life, Jefferson produced no hint of a philosophical system; his philosophizing was provoked by confronting immediate problems of politics, agriculture, science, morality, and theism. His philosophical spirit is sometimes more evident than a philosophy as such; it can be ascertained by observing the manner in which he analyzed and clarified his own ideas and beliefs by thinking them through to their broadest foundations.[13] The man's constitutional aversion to abiding long in the sphere of doubt explains his occasional references to a preference for the "pillow of ignorance" on which to rest his head.[14]

A more specific characterization of the mode and substance of Jefferson's philosophizing, reflecting (in introductory fashion, at least) the diverse orientations suggested by the sources of his thought, is found below in a brief account of his "methodological materialism." Before considering that topic, however, a few preliminary remarks on his general view of education and philosophy of education are in order.

The fact of the importance of education to Jefferson is readily

apparent. In 1736, he encouraged his legal mentor to "Preach...a crusade against ignorance; establish and improve the law for educating the common people."[15] In regard to this advice given by Jefferson, one commentator observes that "Seldom can a man more dramatically, more persistently, and more effectively have practiced what he himself proclaimed for...Thomas Jefferson's entire life was just such a crusade."[16]

The kind of importance attributed by Jefferson to education must be understood in light of the manner in which he saw its relationship to political matters.[17] The argument is very explicit: good democratic government rests squarely upon the freedom of its citizens; that freedom cannot be exercised satisfactorily without enlightenment; therefore, the education of the common citizens is essential. Since democracy without liberty is impossible, and liberty without enlightenment is impossible, democracy without education is a contradiction.[18]

Jefferson's attention to education was both theoretical and practical. Evidence of the latter is found in his plans to establish a library on three different occasions,[19] his blueprint for the public schools of Virginia,[20] and his masterminding of the scheme for the University of Virginia.[21] His cardinal pedagogical principle was "independent study on a lifelong basis," truly a reflection of his philosophical spirit.[22]

The above remarks indicate Jefferson's interest in, and attention to, philosophy and education. However, is there any evidence that he devoted effort to relating them? The answer is in the negative if the question is intended to ask whether he formulated a systematic philosophy of education.[23] However, since one cannot grasp "the Jeffersonian educational ideas in their fullness without first sensing the essence of Jeffersonianism as a philosophy of politics, morality, and human destiny,"[24] and since the realization of Jefferson's political and ethical ideals depends fundamentally upon education,[25] the man must be considered a highly significant contributor to the history of American philosophy of education.

A key point is this: Jefferson's educational theory and practice cannot be appreciated without serious attention to the wider background of his philosophical and religious principles. His interest in philosophy of education manifests itself in the combination of his strong interest in philosophy, the kind of (practical) interest he held in philosophy, and the scope of his educational theory and practice. It is a particular aspect of this philosophy of education, namely, his philosophy of religion (and morality) and its implications for education, to which most of the remainder of these remarks is directed. A part of the basis for this topic lies in the foundation of Jefferson's approach to philosophy, known as "methodological materialism."

II—"Methodological Materialism"

Justification for attributing to Jefferson an attitude, if not a doctrine, called "materialism" is based in some measure on a letter he wrote to John Adams in 1820. Stirred up by certain questions posed by Adams, Jefferson asserts the following:

> ...I was obliged to recur ultimately to my habitual anodyne, "I feel, therefore I exist." I feel bodies which are not myself: there are other existences then. I call them **matter**. I feel them changing place. This gives me, **motion**. Where there is an absence of matter, I call it **void** or **nothing**, or **immaterial space**. On the basis of sensation, of matter and motion, we may erect the fabric of all the certainties we can have or need. I can conceive **thought** to be an action of a particular organization of matter, formed for that purpose by its Creator, as well as that **attraction** is an action of matter, or **magnetism** of loadstone. When once we quit the basis of sensation, all is in the wind. To **talk of immaterial** existences is to talk of **nothings**. To say that the human soul, angels, God, are immaterial, is to say, they are **nothings**, or that there is no God, no angels, no soul. I cannot reason otherwise; but I believe I am supported in my creed of materialism by the Lockes, the Tracys, and the Stewarts.[26]

In this passage, referred to by Adrienne Koch as "the most direct statement of his [Jefferson's] philosophical 'position' available,"[27] is the basis for clarifying not only the **fact** of Jefferson's materialism, but also the **kind** of materialism which he tended to promote. In regard to the latter, the first part of the long citation is somewhat misleading; The first six sentences are directed to the question of the nature of **reality**, as such. However, it will be noted upon a careful perusal of the remainder of this passage that the focal point is the question of the nature of **knowledge**. This distinction is crucial to a general characterization of Jefferson's philosophy; it represents the foundation for the demarcation of "mechanical metaphysical materialism" (associated with the question of the nature of reality) from "conservative methodological materialism" (associated with the question of the nature of knowledge).[28]

The fact that only the first part of this Jeffersonian passage (just cited) seems to be addressed directly to a question of reality, as such, while the context is quite obviously one of a greater, if not relatively exclusive, preoccupation with a question of human knowledge, is taken to be some indication that Jefferson's philosophical quest (with some qualifications apparently needed) pertains primarily not to a doctrinaire denial of all spirit, but to an emphasis upon the exclusive use of empirical

methods.[29] This interpretation not only explains the passage cited with some consistency, but also fits the philosophic temper of the man, described above as directed primarily toward the rational explanation and justification of human actions. In other words, Jefferson's inclination toward "practical speculation" in philosophical matters would lead one to predict that he would display a greater interest in questions of the nature of human knowledge than in questions of the nature of reality, as such. (This same inclination helps to explain his strong interest in moral questions.)

This view of Jefferson's attitude toward philosophy, while apparently accurate and significant, is short-sighted without reference to his philosophy of religion. The paradoxes of his temperament, as well as the intermingled varieties of sources that influenced the development of his philosophizing (as discussed above), suggest a far more complex picture than has been portrayed thus far. The fact of the matter is that Jefferson's self-proclaimed materialism must be appreciated along with the understanding that "in moral philosophy he was a deist."[30] This assertion raises questions of the relationship of his moral philosophy to his theism, and the relationship of both of those aspects of his thought to his materialism.

This brings us to the central feature of these remarks, to be directed first to the Jeffersonian meanings of "theism" and "morality," which constitute the "Christian religion"; and then to implications for the role of religion in public education. One of the key issues in these matters centers upon the notion of "religious sectarianism."

III—Philosophy of Religion

Thomas Jefferson did accept the existence of God; in fact, he wrote to James Monroe in the year in which he was elected president of the United States that the accusation that he was an atheist was a calumny and a lie.[31] The foundation for Jefferson's insistence upon the existence of God is human reason. In a well-known letter to his nephew in 1787, he asserted, "Your reason is the only oracle given you by heaven." He advises his nephew to "Question with boldness even the existence of God."[32]

Two arguments are adduced to substantiate the existence of God, one based upon the order or design in the universe, and the other centered upon the general consensus of opinion. Concerning the first, he claimed that the functioning of solar, stellar, planetary, and organic systems pointed to a "Fabricator of all things...a Superintending power, to maintain the universe in its course and order."[33] In the other argument

(stated as the first of the two arguments in the 1823 letter to Adams), he contends that the overwhelming number of persons who accept the existence of God "proves" the existence of such a being. The two arguments, taken together, appear to have provided conclusive evidence from Jefferson's viewpoint, for he asserts that these reasons for the existence of God are "irresistible."[34]

While one can know **that** God exists, Jefferson explains, speculation upon his nature (to determine whether he is spiritual or material, for example) is superfluous and wasteful. "Of the nature of this Being we know nothing,"[35] he insists. He deplores theological speculation about the nature of God, admitting pervasive ignorance of attributes of God and his mode of providence, desiring privacy on the matter, and wishing for the promotion of unity through such abstention.[36]

However, Jefferson is not reluctant to refer to God as an intelligent and benevolent Creator,[37] and to apply such names as the following to the Deity: "God" ("my God," "God of the Universe," "God of justice"); "Deity"; "Author of nature"; "Almighty"; "Author of morality"; "Supreme Being"; "Holy Author of our religion"; "Creator" ("our Creator," "benevolent Creator," "Creator of the Universe," "common Father and Creator of men"); "intelligent and powerful Agent"; "Ultimate Cause"; "Being who presides over this world"; "He who made us"; "benevolent Governor of the World"; "Giver of Life"; "Providence" ("over-ruling Providence"); "Infinite Power which rules the destinies of the universe"; "Fabricator, Preserver, and Regulator"; and "Creator, Preserver, and Supreme Ruler of the Universe."[38] Of these names for God, commonly employed during the Enlightenment, that of "Creator" seems to be the most frequently used. At any rate, it is evident that the assertion that God is the author or designer of man and the universe[39] (which is known through reason) is a foremost Jeffersonian religious principle.

Apparently Jefferson's view of life-after-death is ambiguous; at least, one can draw that conclusion from the diverse interpretations. Robert M. Healey tends to see Jefferson accepting the existence of an afterlife,[40] Koch seems to question that position,[41] and Gilbert Chinard claims that, while Jefferson was inclined to reject immortality early in life, he reversed that tendency as he grew older.[42]

In the context of his arguments for the existence of God, Jefferson stresses the uprightness, as distinct from the rightness, of one's decision. This illustrates a vital dimension of his moral theory, the significance of motive and intention. The appellation "Christian morality" is suggested insofar as Jesus of Nazareth is seen as the exemplar among those concerned with the uprightness of decisions. He is also a model for the spirit of benevolence or charity, the other essential feature of morality.[43]

Before considering the natural foundation of these moral virtues (of inward intention and benevolence), attention to Jefferson's view of the general relationship between religion and morality is in order. As in so many other instances concerning his personality and reflections, there is a tendency toward a dichotomy. He tends to separate and to unite these two areas of life and thought. Evidence for the former (the separation of religion and morality) includes the following Jeffersonian views: (1) the virtuousness of an atheist such as Condorcet; (2) the lack of necessity to bind morality to the practice of any particular religion; and (3) the possibility that the social toleration of atheism or any renunciation of religion might be as constructive a base for morality as religion itself. The obvious tendency in these arguments is toward the autonomy of moral values.[44]

However, on the other side, morality is seen not merely as intimately related to religion, but as an integral part of it. First of all, the moral sense, the innate source of moral awareness and activity in human beings, is God-given.[45] Secondly, the moral precepts of Jesus constitute at least an aspect of true religion, which is necessary to the good life. In this regard he wrote to Adams in 1817:

> If by **religion** we are to understand **sectarian dogmas**, in which no two of them agree, then your exclamation on them is just, that this would be the best of all possible worlds, if there were no religion in it. But if the moral precepts, innate in man, and made a part of his physical constitution, as necessary for a social being, if the sublime doctrines of philanthropism and deism taught us by Jesus of Nazareth, in which all agree, constitute true religion, then without it, this would be, as you again say, something not fit to be named even, indeed, a hell.[46]

Reference was made above to the natural foundation of the moral virtues and later to the moral sense. The moral sense is the sub-stratum of the moral virtues. More specifically, it is an innate instinct or inclination in nearly all individuals by means of which they tend naturally to be aware of the distinction between good and evil, and to become authentic persons who act benevolently toward other human beings.

The purpose of the moral sense doctrine, a conventional view of intuitionalist ethics of the late 18th and early 19th centuries, was to thwart questions that tend to erode the source, authority, and generality of moral judgments. The preservation of moral stability, of great concern to Jefferson, likely appeared to him as threatened by his methodological materialism. If one can know only through empirical methods, what reason is there to think that any particular moral principles would be maintained as realistic for any given period of time? Again, the ambivalence of Jefferson is apparent, perhaps more so in this dualistic approach

to human awareness than anywhere else in his thought.

The innate God-given moral instinct is universal, according to Jefferson—if one will admit that there are occasional exceptions.[47] He unites the moral sense doctrine with his theory of utilitarianism, associating both with the significance of the socialization of the human being. Specifically, he argues that the social tendencies and needs of the person are fulfilled through love of and cooperation with other human beings, which is made possible and even made pleasurable by the moral instinct, implanted in the person by the Creator.[48]

Some implications of the existence of the moral sense include Jefferson's optimism concerning the honesty and goodness of the average citizen and the base this provides for a democratic form of government. The moral sense also constitutes the bedrock of universal civil rights.[49] (Its implications for education will be discussed below.) While Jefferson's general view of human nature entails a prominent focus on rationality, there is some indication here of a tendency to de-emphasize reason.[50] This circumstance appears to be related to the larger question of the relationship of his methodological materialism to his deistic ethics founded upon the moral sense theory.

It is important to note that, while God and Jesus of Nazareth are both significant figures in Jefferson's scheme of religion, Jesus is merely a man (not God) created by God as other human beings. For some reason, however, Jesus became **the** moral exemplar of the human race in Jefferson's eyes. Jefferson insists that primitive Christianity was free of mystery as a transcendence of reason, which was introduced by Judaic and Greek sources.[51] In his interpretation, most, if not all, of the Church Fathers of the first three centuries were materialists, "extending it even to the creator himself."[52] In fact, Jesus himself, although looked upon by Jefferson for a time as a "spiritualist," was later recognized as a materialist.[53]

In summary, there are two distinctive aspects of Christian morality, which is founded upon the innate, God-given moral faculty called the moral sense or moral instinct. There is an elementary emphasis on inward motive and intention, and a spirit of benevolence or charity. The first relies heavily upon impulsive feeling, not in a strictly individualistic sense, but with a "majoritarian check."[54] The second dimension of morality is opposed to self-love and is epitomized in the life of Jesus of Nazareth.[55]

In conclusion to the question of the relationship between religion and morality, Jefferson's notion of the "common core" of religious beliefs is vital. In regard to a search for the correct religious belief, noting obvious differences among persons, he detects the basis for a variety of opinions

in varying physical structures of the brain (presuming an opinion shared by fellow members of the American Philosophical Society, that ideas are determined by the structure of the brain); he also points out the desirability of a variety of religious creeds on aesthetic grounds (to avoid moral monotony).[56] On the other hand, he highlights the "consensus gentium," insisting that freedom of reason will lead to agreement among people in the apprehension of truth.[57]

In this context, he formulates the "common core" of religious beliefs, those beliefs that are common to the religions of all persons. This common core unquestionably excludes theological speculation, any supposed supernatural revelation, and all Trinitarian doctrines of a Supreme Being.[58] Positively, it is composed of: (1) belief in the existence of God proven by (a) design or order in the universe and (b) the consensus of the people; and (2) moral beliefs, meaning (a) inward motive and intention and (b) benevolence or charity.[59] This understanding is sufficient evidence that for Jefferson morality is an integral part of religion; therefore, in the last analysis, to be moral (in his sense) is to be religious. One final topic precedes an investigation of the implications of Jefferson's view of religion for the public school. It concerns his version of religious freedom, a matter of great moment to Jefferson himself, and one of extraordinary importance to his interpretation of the role of religion in public education. The following passage from A Bill for Establishing Religious Freedom summarizes the Jeffersonian meaning of religious freedom:

> We the General Assembly of Virginia do enact that no man shall be compelled to frequent or support any religious worship, place, or ministry whatsoever, nor shall be enforced, restrained, molested, or burthened in his body or goods, nor shall otherwise suffer, on account of his religious opinions or belief; but that all men shall be free to profess, and by argument to maintain, their opinions in matters of religion, and that the same shall in no wise diminish, enlarge, or affect their civil capacities.[60]

The importance of this bill to its author is seen in Healey's observation that "Just as all of Jefferson's subsequent political writings are in a sense commentary upon the Declaration of Independence, so all of his subsequent writings on the problem of religious liberty are commentary on A Bill for Establishing Religious Freedom."[61] Furthermore, the Statute of Religious Freedom, a slightly modified version of Jefferson's Bill, which (the Statute) was passed by the Virginia Assembly in 1786, was regarded by Jefferson personally as "one of the crowning achievements of his career...."[62] Direct evidence for this assertion is found in his epitaph cited at the outset of this paper.[63] His intellectual posture concerning this topic remained relatively stable throughout his life.[64] A

major theme in American political history which is consistently associated with Jefferson's Bill for Establishing Religious Freedom is the "wall of separation of church and state."[65] Jefferson is responsible for having coined that phrase in a letter written in 1802, as President of the United States, to a committee of the Danbury (Connecticut) Baptist Association. In that letter he said:

> Believing with you that religion is a matter that lies solely between man and his God, that he owes account to none other for his faith or his worship, that the legislative powers of government reach actions only, and not opinions, I contemplate with sovereign reverence the act of the whole American people that declared that their legislature should "make no law respecting an establishment of religion, or prohibiting the free exercise thereof," thus building a wall of separation between Church and State.[66]

The "wall of separation" is a metaphor expressing Jefferson's view of an ideal relationship between church and state. His real intention here apparently was not separation in any literal sense, but true freedom of religious belief and opinion, or the protection of freedom of conscience. The practical desideratum was the development of flexible, pragmatic arrangements designed to meet ever-changing religious and political circumstances. Some evidence to support the contention that Jefferson's wall of separation was intended by him to be neither a wall nor a separation lies in his (presumed) authorship of two other bills following promulgation of the Bill for Establishing Religious Freedom. The titles of those two illustrate the point: one is the Bill for Punishing Disturbers of Religious Worship and Sabbath Breakers, and the other is the Bill for Appointing Days of Public Fasting and Thanksgiving.

Although Jefferson apparently did not comment directly upon religious freedom and public education, the significance of the former for the latter will become clear in the final section below.

In this section on Jefferson's philosophy of religion, three fundamental topics were considered: his theism, his philosophy of morality, and his doctrine on religious freedom. The first two topics constitute the "common core" of all religions. The existence of God is proven rationally in two ways, by the design in the universe and by the consensus of the populace. This God created man with a moral sense or moral instinct that explains human inclinations toward authenticity and sincerity, on one hand, and benevolence or charity, on the other. The "Christian" dimension of this morality (and, therefore, religion) is evident in Jefferson's attitude toward Jesus, the most exemplary moral person.

The freedom of religion must be politically protected and promoted by whatever devices can be forged legally and ethically. It seems

especially important to note at this point that Jefferson apparently did not want to separate religion (in his sense) from the state, but he assigned to the government the responsibility for preventing the public promotion of any **sectarian** religion. Furthermore, his own religion is distinguishable from sectarian religions in that it is comprised (in his eyes) of that which is common to persons of all religious persuasions. These last observations suggest the central feature of his attitude toward the role of religion in the public school.

IV—Religion in Public Education

Enroute to a discussion directly reflecting this heading are brief considerations of the general aims of education according to Jefferson, his educational ladder, and the distinction between private and public education. In regard to the first of these three matters, Jefferson designates three educational aims: the attainment of morality, health, and knowledge. The last named he desires for utilitarian reasons: for vocational and general usefulness, for oneself, and for society. "Good health," to him, is a result of early rising and retiring, clean living, and daily exercise. Despite the importance attributed to knowledge and health, morality holds priority among these three aims.[67] For example, he advises his nephew, "'Give up money, give up fame, give up science, give up the earth itself and all it contains, rather than do an immoral act."[68]

The overall result of an ideal education, according to Jefferson, is the enhancement of the happiness of individuals "by improvements in their minds, their morals, their health, and in those conveniences which contribute to the comfort and embellishment of life."[69] Not coincidentally, these three educational goals are a direct outgrowth of Jefferson's philosophy of man in which the human being is seen as a physical being endowed with reason and a moral faculty. (Although Jefferson recommends these same goals for women and men, for the former he associates them with duties of being housewives and mothers.)[70]

Four stages of education can be distinguished in Jefferson's educational ladder; those steps, their pertinent age spans, and their specific purposes are described in what follows:

- Elementary education (ages six to nine)—to provide the student with necessary information; to cultivate the ability to read, write, and calculate; and to promote moral formation and sociability.
- Secondary education (ages ten to 15 or 16)—to prepare the student for college.

- Collegiate education (late teens)—to cultivate the student's power of reasoning; to promote comprehension of knowledge; and to enhance the formation of character.
- Postcollegiate or postgraduate education (post teens)—usually to prepare the student for one of the professions (as law, medicine, or engineering), but, also, simply to promote the student to become more capable of living a happy public or private life.

Jefferson distinguishes between the utilitarian and ornamental values of the various subjects of study at all levels. The former refers to the practical personal or social value of a subject, while the latter is associated with relaxation, sometimes entailing subjects auxiliary to principal subjects (Some subjects of ornamental value include mathematics, history, chemistry, and botany.) One universal, fixed rule of the curriculum is the necessity to avoid metaphysics, speculation on the nature of immaterial and transcendental things. The foundation for this prescription obviously lies in his methodological materialism and his attitude toward speculative theology. Although there is some overlap of purposes and general kinds of curricula content, Jefferson did see the need for following a developmental pattern.

One further consideration, concerning the distinction between private and public education, will bring us to the central question of the role of religion in the public school according to Jefferson. For him there is no substantial difference (that is, concerning the substance) between private and public education on a theoretical plane. He claims that private and public education (ideally) entail the same kind of process intended to meet two specific needs in a democracy, namely, the formation of the general populace to enable them to participate intelligently in the government and the cultivation of an intellectual elite to manage societal matters.[72]

As a result of the negation of any substantial difference between private and public education in the realm of theory, we can conclude that the role of religion in private education is fundamentally no different from the role of religion in public education. Since the formal public school occupies the focus of the thesis here, the phrase "religion in public education" usually will be employed.

The fact that religion must have a central place in all education, and, therefore, in public education, lies in Jefferson's view of morality as the most significant aim of education. Since morality is a primary aim of education, and since morality is an aspect of religion, religion must occupy a central place in the educational process. Since the life and teachings of Jesus represent moral life and moral theory *par excellence*, the *Bible* (Jefferson's version of it as expressed in his *The Life and Morals*

of Jesus of Nazareth) presumably would be important content in this view of education. A major purpose of religion in public education is to develop moral human beings. This is intended, again, for all citizens and for prospective leaders, as such. One means recommended to strengthen the God-given moral faculty is to employ it regularly in particular situations in order that right moral decisions will become habitual.

Religion also consists, of course, of the inner conviction of the existence of God. Logically, this is the most fundamental feature of religion since God is the creator of human beings and the moral faculty by which they become good social persons. In fact, Jefferson insists that proofs for the existence of God should be a part of the content of higher education. To know of God is to know of the author of morality and to be more familiar with the foundations and motivations of morality.[73]

In summarizing Jefferson's version of the role of religion in public education, it is of extraordinary importance to note the distinction between religion and sectarian religions. While the latter refers to the established churches (religious sects) of his day, which ought to judiciously diminish into non-existence, the former connotes the common core of these sectarian religions (as described above), and needs to be promoted as a means of attaining genuine social and political tranquillity. Therefore, in light of the nature of religion and religious freedom, and the purposes of public education, "those areas of religion upon which all sects agreed were certainly to be included within the framework of public education."[74]

As previously indicated, this common core of all religions, that which they all share, includes acceptance of the existence of God (on the basis of rational evidence) and morality (involving inclinations toward authenticity and benevolence by means of the God-given moral faculty). Jefferson adds to these two features of religious commonality "classical tongues," the Hebrew, Greek, and Latin languages, in light of the fact that they are "the depositories of the originals, and of the earliest and most respected authorities of the faith of every sect."[75] Therefore, the study of these classical languages (a common feature of nearly all, if not all, secondary and higher education of his day) is to be included in public education.

While much of the evidence for the conclusion toward which these remarks have been directed stems ultimately from a multiplicity of primary sources, three specific educational proposals are noted by Healey and are pertinent here. Those three blueprints are: (1) A Bill for Amending the Constitution of William and Mary, and Substituting More Certain Revenues for Its Support (1779)—a plan for the revision of the College of William and Mary, shifting the authority for its operation from

the Church of England to the state;[76] (2) a letter to Peter Carr (1814)—a plan for the development of Albemarle Academy, a private secondary school in Charlottesville, Virginia;[77] and (3) the Rockfish Gap Report (1818)—a plan for the establishment of the University of Virginia.[78]

Two brief excerpts will be cited from the last of these three documents, provisions for the University of Virginia, to exemplify the point regarding the role of religion in public education The first quotation, taken alone, might be employed to suggest that Jefferson wished to have all religion eliminated from the curriculum:

> In conformity with the principles of our Constitution, which places all sects of religion on an equal footing, with the jealousies of the different sects in guarding that equality from encroachment and surprise, and with the sentiments of the Legislature in favor of freedom of religion, manifested on former occasions, we have proposed no professor of divinity....[79]

However, the remainder of that same sentence indicates indirectly part of Jefferson's own stance on religious matters, and directly the role of his view of religion in a state university:

> ...and the rather as the proofs of the being of a God, the creator, preserver, and supreme ruler of the universe, the author of all the relations of morality, and of the laws and obligations these infer, will be within the province of the professor of ethics....[80]

While this citation does not indicate that Jefferson had at this time abandoned the "wall of separation of church and state," it provides a clue to the fact that he did not mean by that phrase the elimination of religion from public education. In fact, the urgency, or even the necessity, which he observes for (his version of) religion in this proposed state university, might be seen as a model of the means of preserving and enhancing religious freedom through public higher education.

In connection with the provisions for the University of Virginia, there was developed a plan for theological schools "on the confines" of the university. Perhaps, in answer to objections concerning a lack of systematic religious exposure, it is recommended that divinity schools be established near the university to enable their students to attend regularly scheduled classes there.[81] Jefferson says that, "by bringing the sects together and mixing them with the mass of other students, we shall soften their asperities, liberalize and neutralize their prejudices, and make the general religion a religion of peace, reason, and morality."[82]

On the basis of this evidence, it does not appear unreasonable to conclude that the "Christian religion" should be taught in the public school in the form of proofs for the existence of God, fundamental

features of morality as exemplified by Jesus of Nazareth, and the classical languages that represent the sources of religion. While the doctrines of religious sects can have no place in a public school, the tenets common to all sects must be an integral feature of any scheme of public education intended to produce the moral person and to foster religious freedom.[83]

V—Conclusion: Concerning the Historical Context

Before proceeding to final remarks concerning some contemporary ramifications of this interpretation of Jefferson's view of the role of religion in public education, brief attention will be given to the question of an evaluation of his position as explained above. What follows immediately is not an evaluation, as such, but some considerations pertaining to an evaluation.

There can be at least three kinds of conclusions in any evaluation—a positive judgment, a negative judgment, or a mixed judgment (a combination of the first two). These judgments can be ascertained either "externally" or "internally"; the former arises from an intellectual posture characterized by the evaluator's conscious refusal or unconscious failure to accept (even hypothetically at that moment) the point of departure and general approach assumed by the one whose thought is being evaluated. This also might be called "extrinsic" evaluation, and a corresponding point of criticism might be referred to as an "extrinsic" difficulty. On the other hand, an evaluative judgment determined "internally" is one that arises while accepting (at least hypothetically, and insofar as is possible in the circumstances) the point of departure and general approach assumed by the one whose thought is being evaluated. From this perspective one is able to detect "intrinsic" difficulties or "internal" inconsistencies.[84]

Within the realm of "intrinsic" difficulties, there are at least two topics in the selected aspects of Jefferson's philosophy of education that seem to arise. One concerns the relationship between his theory of knowledge and his ethics. It will be recalled that his brand of materialism seems to follow a pattern called methodological (perhaps, epistemological) materialism rather than mechanical metaphysical materialism. That is, he seems to be an empiricist of some sort in his description of the process of human knowing. On the other hand, due perhaps somewhat to his strong concern for preserving the stability of morals, he develops the moral sense theory, in which morality is founded upon an innate, God-given moral faculty. This mode of explaining morality, perhaps meaningfully referred to as "intuitionist ethics," certainly raises ques-

tions of consistency when aligned with an empiricist theory of knowledge. However, Jefferson should be credited for posing (at least implicitly) a kind of problem that has perplexed philosophers perennially.

A second topic in this area of Jefferson's philosophy of education that seems to fall within the realm of "intrinsic" difficulties concerns his self-proclaimed non-sectarian position concerning religion. One tends to wonder how he can formulate particular proofs for the existence of God, and a definite position concerning the meaning and exemplification of what is "good," and claim to be specifying what is common to all persons, or even all admittedly religious persons. Further doubts might arise when it is known that Jefferson, at one time, called himself a Unitarian.[85] Nevertheless, he again should be commended for suggesting a crucial problem entailing the disunity in religion along with the need to unify education and the country itself, and for confronting the situation courageously.

Some of the central issues confronted by Jefferson in developing his view of the role of religion in public education in the United States are directly related to the contemporary phenomenon of secularization in American education. For example, concerning education at the collegiate level, George M. Marsden points out that we have passed "from an era when organized Christianity and explicitly Christian ideals had a major role in the leading institutions of higher education to an era when they have almost none."[86] These Christian ideals, he says, have been replaced by an "aggressive pluralistic secularism."[87]

Explaining the meaning of "secularism," Marsden goes on to note that to many Americans "it just seems obvious that university education must be secular, that it **ought** to be free from religiously informed influences."[88]

> University education and the intellectual inquiry associated with it, they typically believe, by its very nature excluded religiously informed points of view. To suggest anything else is academic heresy.[89]

Therefore, what was once considered the center of the intellectual life has become "absolutely alien to whatever is important to the enterprise."[90]

Another observation by Marsden provides a clue to the connection between contemporary secularism and a distortion of history: "That many educated people today are unaware that until so recently leading American schools promoted Christianity is one index of how secular the current scene has become."[91] The common understanding, found in scholarly journals, lectures, and textbooks, has been "the perception of American higher educational history moving from sectarian and pious

colleges to enlightened and secular universities"[92]—during the 19th century.

What facts betray the popular wisdom? For example, in 1924 Yale, Princeton, and the (state) University of North Carolina at Chapel Hill required their undergraduates to attend chapel; the administrators of these universities spoke of "the 'Christian' character of their work."[93] For example, in 1939

> nearly one-fourth of state universities and colleges still held at least voluntary chapel services and most routinely subsidized campus religious activities. A number of state schools gave credit for course work offered by denominational campus ministries.[94]

For example, until the 1960s religion courses were required of undergraduates at Duke University.[95]

Substantial historical evidence supports the following facts: the nine Colonial colleges, with one exception, were thoroughly Christian institutions of learning; the denominational colleges of the early and later 19th century embodied a thoroughly Christian character; and the **state** colleges and universities founded in the 19th century were basically Protestant institutions that retained some explicit form of Christian commitment well into the twentieth century.

According to Marsden, these facts pertain to a current distortion of historical awareness because the key to such distortion is an omission of the role of religion in the (modern) American university. He asserts that while

> a few general works recognize the place of religion, many more in the vast literature of higher education ignore it. Strikingly few published studies provide a sustained focus on what has become of the religious dimensions of the modern university. Until now, no general history has been published on this subject.[96]

Perhaps, this portrayal of the current secularization of higher education in the United States, even to the extent of distorting its history, helps to explain why most modern scholarship tends to depict Jefferson as a secularist and his University of Virginia as the prototype of modern secular American universities.[97]

The demise of the dialogue concerning some of the most fundamentally human questions that can be asked about and in education has reached something approximating maximal proportions in the United States during the 20th century. This observation brings to mind Christopher Dawson's contention that, while in 18th-century France secularism and secularistic schools were promoted openly and **directly**, secularism and secularistic public education in the United States have

developed almost unwittingly. He means by this that American public schools have become secular and have promoted secularism **indirectly**, primarily by indifference to religion.

To avoid entangling theological and philosophical disputes in such a pluralistic country as this, the notion that we need to avoid public expression and debate of these matters has developed. The attitude that the school must be neutral toward religion, enforced by a legal interpretation of "a wall of separation of church and state" (supposedly intended by the First Amendment to the Constitution) tending to force schools to omit discussion of religious (and philosophical?) issues, has brought about a religion of no religion, or secularism.[98]

Can fundamental theological and/or philosophical questions be overlooked entirely in developing and implementing educational plans? Perhaps all could agree that these kinds of questions and the modes of thought entailed in answering them intelligently are not existentially necessary in a given situation demanding an educational decision. However, it appears rationally justifiable to contend that, even if these kinds of questions and the appropriate processes of reflection are missing, there will be conclusions of a theological and/or philosophical nature underlying all truly human decisions, including educational decisions.[99] If this is correct, a school and its individual educators cannot be neutral regarding fundamental values. To avoid teaching religion and to avoid even the question of teaching religion are not neutral; rather, they represent specific positions that teach students something very definite about religion.

This last remark suggests a final comment on Jefferson's view of religion in the public school. While he can be criticized for his particular view of the role of religion in the public school, and for not having been more aware of the (at least apparent) inconsistencies involved in that view, he cannot be criticized for assuming **some** particular view of the role of religion in the public school. Any alternative to a specific intelligently devised and well-developed plan for the role of religion in the school, consciously and openly promulgated and implemented, is necessarily inhuman because it overlooks essential features of reality. The role of religion in the school is not a new American educational problem, but one that can be traced to the first colonial school. The fact that the problem remains unresolved in this pluralistic American society may not seem as serious to some as the widespread lack of awareness of the fact that it still exists.

Notes

1. James W. Hillesheim & George D. Merrill (eds.), *Theory and Practice in the History of American Education: A Book of Readings* (Pacific Palisades, CA: Goodyear Publishing Company, Inc., 1971), 123.
2. The "educational theory" of Jefferson apparently needs to be distinguished from his "educational practice" (in the sense of the formulation of specific practical plans for a school system or the University of Virginia) at this juncture because of the lack of evidence that the fundamental significations of the two are identical.
3. The radical divergences among the interpretations of Jefferson's philosophy of religion and its educational applications, although not of direct, primary interest in this context, are discussed in some detail below.
4. Gordon C. Lee, "Learning and Liberty: The Jeffersonian Tradition in Education," in *Crusade Against Ignorance: Thomas Jefferson on Education*, edited by Lee (Classics in Education, no. 6, under the general editorship of Lawrence A. Cremin) (New York: Teachers College Press, 1961), 6-7. [Hereafter, this essay will be referred to as "Learning and Liberty," and this book will be referred to as *Crusade Against Ignorance*.]
5. Adrienne Koch, *The Philosophy of Thomas Jefferson* (Chicago, IL: Quadrangle Books, 1964), 104. This book was published originally by Columbia University Press in 1943.
6. *Ibid*, especially Chapter I, "Education and Philosophical Sources" (in Part One: "Ethics"), 1-8; and Chapter VI, "Philosophical Debut" (in Part Two: "Philosophy and Ideology"), 44-53
7. *Ibid*, xii.
8. *Ibid*, xiii-xiv.
9. *Ibid*, xii-xiii.
10. *Ibid*, xiii.
11. "Syllabus of Doctrines of Jesus," cited by Robert M. Healey, *Jefferson on Religion in Public Education* (New Haven, CT: Yale University Press, 1962), 119.
12. Koch, 102.
13. *Ibid*, 90.
14. *Ibid*, 102-03, footnote 31, citing (on p. 103) a letter to John Adams, Monticello, 14 March 1820.
15. Letter to George Wythe, Paris, 13 August 1786, *Crusade Against Ignorance*, edited by Lee, 100; Also cited by Lee, "Learning and Liberty," *Crusade Against Ignorance*, 1.
16. Lee, "Learning and Liberty," *Crusade Against Ignorance*, 1-2.
17. *Ibid*, 1.
18. *Ibid*, 2-3.
19. *Ibid*, 5-6. See also Koch, 15n, 48n, 105-07.
20. See Thomas Jefferson, "A Bill for the More General Diffusion of Knowledge," *Crusade Against Ignorance*, edited by Lee, 83-97.

21. See Thomas Jefferson, "Report of the Commissioners Appointed to Fix the Site of the University of Virginia, Etc.," *Crusade Against Ignorance*, edited by Lee, 114-33
22. Lee, "Learning and Liberty," *Crusade Against Ignorance*, 22.
23. *Ibid.*, 23.
24. *Ibid.*, 9
25. *Ibid.*
26. Letter to John Adams, 15 August 1820, cited by Koch, 100-01.
27. Koch, 100.
28. Although the uses of various terms in this realm are far from consistent, it might be meaningful and helpful to associate "positivism" with the first named form of materialism, which is addressed primarily to defending the thesis that only matter **exists**; and "empiricism" with the second mode, which is directed fundamentally to justifying the contention that one can **know** only that which can be attained through the senses.
29. Koch, 98-102. Perhaps one could retain the singular "method" in this context; however, the plural form is employed due to the apparent facts that Jefferson has not provided a developed theory of knowledge proposing a single, well-defined method, and, presumably, he recognized differences in applying an empirical approach to differing modes of reality (for example, a tree and a person).
30. *Ibid.*, 95
31. Letter to James Monroe, 26 May 1800, referred to by Healey, 26.
32. Letter to Peter Carr, 10 August 1787, cited by Healey, 27. See also Koch, 29-30.
33. Letter to John Adams, 11 April 1823, cited by Koch, 37. See also Healey, 34-35.
34. Healey, 27.
35. Koch, 37.
36. *Ibid.*, 37-38.
37. *Ibid.*, 37.
38. Healey, 27-28.
39. *Ibid.*, 28.
40. Healy, 30-33. Pertinent letters of Jefferson cited or referred to by Healey include the following: to Peter Car, 10 August 1787; to Thomas Law, 13 June 1814; to Mrs. Cosway, 27 December 1820; to John Adams, 13 November 1818; to Marquis de Lafayette, 14 February 1815; to Mrs. John Adams, 11 January 1811; to Isaac Story, 5 December 1801; to Mrs. John Adams, 11 January 1817; to John Adams, 5 July 1814. See also Jefferson's First Inaugural Address, 4 March 1801.
41. Koch, 33-34.
42. Gilbert Chinard, *Thomas Jefferson: The Apostle of Americanism*, second revised edition Ann Arbor, MI: University of Michigan Press, 1 57), 137-39, 519; referred to by Healey. 30-32.
43. Koch, 29-31.
44. *Ibid.*, 28-29.
45. Letter to Thomas Law, Esq., 13 June 1814, cited in Koch, 19,

46. Letter to John Adams, 5 May 1817, cited by Koch, 38.
47. Koch, 18, citing Thomas Jefferson, *Notes on Virginia*; letter to Thomas Law, 13 June 1814, cited by Koch, 19.
48. Letter to Thomas Law, 13 June 1814, cited by Koch, 19; letter to John Adams, 14 October 1815, cited by Koch, 20,
49. Koch, 18-19.
50. Letter to Peter Carr, 10 August 1787, cited by Roch, 16.
51. Koch, 25,
52. Letter to Thomas Cooper, 14 August 1820, cited by Koch, 36.
53. Letter to William Short, 13 April 1820, referred to by Koch, 36. See also letters to John Adams, 15 August 1820; and to Augustus S. Woodward, 24 March 1824, cited by Healey, 34. See also Koch, 36, fn. 54.
54. Letter to Thomas Law, 13 June 1814, cited by Koch, 29. (The quoted phrase is found in Koch, 29, fn. 22.)
55. Letters to Thomas Law, 13 June 1814; and to Dr. Benjamin Rush, 21 April 1803, cited by Koch, 30-31
56. Letters to William Duane, 25 July 1811; Timothy Pickering, 27 February 1821; and Charles Thomson, 29 January 1817, referred to or cited by Healey, 96-97.
57. *Notes on Virginia* and *A Bill for Establishing Religious Freedom*, cited by Healey, 97.
58. For a summary of and references to the sources of this topic, see Healey, 102-110.
59. For a summary of and further references to the sources of this topic, see Healey, 99-102.
60. "A Bill for Establishing Religious Freedom," Lee (ed.), *Crusade Against Ignorance*, 68.
61. Healey, 128.
62. Lee (ed.), editorial comment under heading "The Free Exercise of Religion," *Crusade Against Ignorance*, 60,
63. Hillesheim & Merrill, 123. See note 1 above.
64. Healey, 128.
65. See Lee (ed.), editorial comment under heading "The Free Exercise of Religion," *Crusade Against Ignorance*, 60.
66. "To Messrs. Nehemiah Dodge, Ephraim Robbins, and Stephen S. Nelson, A Committee of the Danbury Baptist Association, in the State of Connecticut," 1 January 1802, reproduced in Lee (ed.), *Crusade Against Ignorance*, 69.
67. Healey, 143-44
68. Letter to Peter Carr, 19 August 1785, cited by Healey, 144,
69. Letter to David Williams, 14 November 1803, cited by Healey, 145.
70. Healey, 145-48.
71. For a summary of and further references to the sources of this topic, see Healey, 148-58.
72. Letter to John Adams, 28 October 1813, referred to by Healey, 185.
73. For a summary of and further references to the sources of this topic, see Healey, 159-61, 162-64, 170-71, 202-05.

74. Healey, 208. See also letters to DeWitt Clinton, 24 May 1807; and to Thomas Cooper, 2 November 1822, referred to by Healey, 208.
75. "Report of Board of Visitors," 7 October 1822, cited by Healey, 209. This aspect of the common core could have been presented earlier; however, it does differ from the other two features in that it represents merely a tool and little, if anything, directly pertaining to the substance of religion and religious education.
76. Healey, 210-13
77. Ibid, 213-16.
78. Ibid, 216-24.
79. "Report of the Commissioners Appointed to Fix the Site of the University of Virginia, Etc.," Lee (ed.), *Crusade Against Ignorance*, 126.
80. Ibid.
81. Report of Board of Visitors, 7 October 1822, cited by Healey, 219, 220-21, 221-22; letter to Thomas Cooper, 2 November 1822, cited by Healey, 223-24.
82. Letter to Thomas Cooper, 2 November 1822, cited by Healey, 224.
83. See Healey, 209. It should be noted that Healey's interpretation of Jefferson, while apparently a reasonable one in light of the evidence he provides, is in serious opposition to at least three other views which he himself points out. The sources of those three viewpoints are the following: J. M. O'Neill, *Religion and Education Under the Constitution* (New York: Harper, 1949); R. Freeman Butts, *The American Tradition in Religion and Education* (Boston, MA: Beacon Press, 1950); and Anson, *Church and State in the United States*, 2 vols. (New York: Harper 1950). Alternative sources for the Butts position are Leo Pfeffer, *Church, State and Freedom* (Boston, MA: Beacon Press, 1953); and Conrad H. Moehlman, *School and Church, the American Way* (New York: Harper & Brothers, 1944) and *The Wall of Separation Between Church and State* (Boston, MA: Beacon, Press, 1951), For Healey's discussion of these sources in *Jefferson on Religion in Public Education*, see pp. 5-16.

    Reviews of Healey's book can be located by means of the following data: *America* (11 May 1963); John Chamberlain, *Wall Street Journal* (9 September 1962); Dean M. Kelly, *International Journal of Religious Education*, (January 1963); Jennings B. Sanders, *Annals* (May 1963) William B. Ball, *The Catholic Reporter* (10 January 1964); Leonard W. Levy, *William and Mary Quarterly* (1964); Martin E. Marty, *Church History* (December 1963); Charles H, Metzger, S.J., *The Journal of Southern History* (February 1963); Adrienne Koch, *American Historical Review* (April 1964); Gilman Ostrander, *Journal of Higher Education* (June 1963); William H. Seiler, *The Mississippi Valley Historical Review* (March 1963); Paul H. Hallett, *New Mexico Register* (Santa Fe), (21 September 1962); Thomas M. Bogie, *Library Journal* (21 September 1962); E.S.B., *Religion in Life* (Winter 1962); A.C.F. Beales, *Journal of Ecclesiastical History*, (Vol. 14, No. 2).
84. In internal evaluation the subjectivity of the knower must be taken into account, of course. Without that, there is no knowledge at all, nonevaluative or evaluative; therefore, objectivity is, in some real sense, a matter of

gradation. Nevertheless, this distinction between the external and internal axial points or perspectives employed in philosophical evaluations seems real and significant,.

85. Healey gives three reasons for contending that Jefferson was definitively sectarian: (1) his missionary zeal; (2) his inability to take seriously the beliefs of those who disagreed with him; and (3) the fact that his own beliefs were not agreed upon by all. A discussion of his Unitarianism can be found in Healey, especially 111-14, and Koch, especially 26-7
86. George M. Marsden, "Introduction," *The Secularization of the Academy*, George M Marsden & Bradley J. Longfield (eds.) (New York: Oxford University Press, 1992), 5.
87. George M. Marsden "The Soul of the American University: A Historical Overview," *Ibid*, 21.
88. *Ibid*, 11-12.
89. *Ibid*, 12.
90. *Ibid*, 11.
91. Marsden, "Introduction," *Ibid*, 4.
92. D.G. Hart, "Christianity and the University in America: A Bibliographical Essay," *Ibid*, 303
93. Marsden, "Introduction," Ibid, 3.
94. *Ibid*.
95. *Ibid*.
96. *Ibid*, 4. See also George M. Marsden, *The Soul of the American University: From Protestant Establishment to Established Nonbelief* (New York: Oxford University Press, 1994).
97. For example, see John S. Brubacher & Willis Rudy, *Higher Education in Transition: A History of American Colleges and Universities, 1636-1976*, revised and enlarged edition (New York: Harper & Row, 1976). Perhaps, these circumstances concerning secularization and the distortion of history also help to explain why Douglas Sloan challenges, by what he says and by what he omits, the thoroughly Christian character of higher education in Colonial America. See Douglas Sloan, "Introduction: The Great Awakening and American Education," *The Great Awakening and American Education: A Documented History*, in Douglas A. Sloan (ed.), Classics in Education No. 46, (series edited by Lawrence A. Cremin) (New York: Teachers College Press, 1973).
98. See Christopher Dawson, *Education and the Crisis of Christian Values* (Chicago, IL: Regnery, 1949) and Christopher Dawson, *The Crisis of Western Education* (New York: Sheed and Ward, 1961) with specific programs for the study of Christian culture by John J. Mulloy.
99. For example, see Jacques Maritain, *Education at the Crossroads* (New Haven, CT: Yale University Press, 1943), 71-75, 80-81.

Can There Be "Rules" for Qualitative Inquiry

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The growing acceptance of qualitative inquiry within the educational research community is a welcome development. Nevertheless, the field is now at a crucial stage where a critical self-reflexiveness is needed to clarify a series of issues which have been lurking in the background and which, in our view, have never been adequately addressed. The lack of attention to these issues is in part due to the continual "skirmishes," both methodological and philosophical (Cook, 1985; Howe, 1988), that qualitative researchers have had to fight in order to justify the legitimacy of their enterprise. Although now largely forgotten, because of the widespread consensus that not only is positivism dead but postmodernism is alive and growing (Fuller, 1993), the original debate between qualitative and quantitative inquiry was situated in the traditional positivist distinction between the "logic of discovery" and the "logic of justification" (Rudner, 1966). This distinction became appended to the Weberian (1964) dichotomy of *geisteswissenschaftlich* and *naturwissenschaftlich* approaches to the study of human behavior and actions, whereby the former was associated with those inquiries grounded in the "logic of discovery" and the latter in those inquiries associated with the "logic of justification."

Consequently, given a generous interpretation of Weber's notion of *verstehen*, qualitative inquiry was deemed to be more appropriate for "discovery," while quantitative inquiry was believed to be concerned with the "justification" aspect of inquiry. It is interesting to note, however, that contemporary investigations in the sociology of science and

some postmodern critiques of scientific practice rely on naturalistic inquiry accounts to "deconstruct" the *naturwissenschaften* grounding of the natural sciences themselves (Fuchs, 1992; Fuller, 1993). In this sense, the context of discovery **becomes** the context of justification. While it is not our purpose to enter the debate as to the proper role and utility of postmodern views on the nature of scientific activity, the issue of the context of discovery, as reflected in naturalistic inquiry, needs further analysis. That is, we believe that there has not been a sufficient attempt made by the qualitative research community to discover, articulate, and justify its own "rules." Such an analysis would begin investigating the relationship of the characteristics of qualitative data as evidence for a given research question or claim.

What we mean by this can be summarized in the following claim, namely, that qualitative inquiry has not to this point seriously addressed what it means to say that research findings have been confirmed or verified. That is, from a context of justification, how does a qualitative researcher know when and how a claim can be put forth as being credible? Borrowing an analogy from empirical analysis, how can the qualitative researcher be assured that he or she is not making a qualitative counterpart of a quantitative error (*i.e.*, assuming a false hypothesis [claim] to be true)?

The qualitative counterpart of another error (*i.e.*, rejecting a true hypothesis [claim]) is seldom an issue in qualitative inquiry since (again) there are no agreed upon rules for determining this type of situation. The first analogue, however, seems to be both possible and more compatible with the intent of qualitative inquiry in general. In other words, the qualitative researcher is under an increased methodological and epistemic obligation "to make the case" that indeed a particular claim is **not** false. But making such a case is exactly what is at issue in all of qualitative inquiry, and this attempt must go beyond ambiguous references to "verification," "confirmation," "plausibility" and so on. In the following sections, we will attempt to suggest an outline for considering an appropriate first approximation to the establishment of a "qualitative context of justification." The first issue to be dealt with will be what we call the data versus evidence problem.

Qualitative Data as Evidence

In examining many qualitative research studies, and in our own work, we have realized that researchers often make a common "category mistake" (Miller & Fredericks, 1993) when using the terms data, evidence, and findings. Strictly speaking, data or findings only become

evidence for a claim when they relate to it in a particular way. This so-called "evidential relation" is a part of confirmation theory (Achinstein, 1982; Swinburne, 1972), a branch of traditional epistemology which attempts to stipulate a series of rules that are both necessary and sufficient for saying a hypothesis (*i.e.*, a claim) has been confirmed. While we cannot examine the history of confirmation theory here, its basic intent is to determine the scope and adequacy of one or more statements that are considered to be "evidence" for some state-of-affairs. Thus, one direction of confirmation theory (Hempel, 1965) has been to establish a series of **logical rules** that are essential in determining that a set of statements do in some sense confirm a claim. The other direction, combined with the first, has been to examine how applications of the probability calculus both generate empirical findings and relate them to some notion of confirmation.

While the idea of confirmation continues to be problematic (Salmon, 1975), especially in terms of its ambiguity, it is clear that for quantitative research methods the combination of confirmation theory with the assumptions of the probability calculus has resulted in a stronger case for a context of justification. Conversely, qualitative research methods have not been as successful in providing for a context of justification, since there have been no standards or rules to which one could appeal. The attempts to provide a type of justification by arguing that qualitative methods produce findings that are "richer," "deeper," or more "insightful" than quantitative findings relegates such language to the context of discovery domain.

Admittedly, qualitative inquiry, by way of a context of justification, cannot be compared to quantitative research justifications. However, it does not follow that **some** form of context of justification rules cannot be formulated for qualitative inquiry. The possibility for such a justification has not been taken seriously because of a series of implicit and explicit misconceptions within the qualitative research community. One such misconception is, again, the tendency to conflate the terms "data" and "evidence." The central question here is, under what circumstances **do** qualitative data become evidence for a claim? This is not only a "what counts" as qualitative data question, but more centrally, **why** does the data "count?"

In our view, these types of questions are necessary to "answer" in some fashion to provide a beginning context of justification for qualitative inquiry. The formulation of such rules is, admittedly, in one sense *ad hoc*, but in another sense it is not, since such rules are actually grounded in confirmation theory. The appeal to confirmation theory is a general one; that is, we believe such a framework is appropriate in a broad sense

to **all** issues of confirmation, whether they be qualitative, quantitative, or historical. Below are a few "rules" which attempt to give a beginning focus to this position.

> Rule 1: The qualitative data taken as a "set" or a "class" of potential evidence-instances must be internally consistent, *i.e.*, non-contradictory.
>
> Rule 2: A consistent data set becomes **evidence** for a claim or hypothesis if it entails the development (to use Hempel's, 1965 term) of the claim or hypothesis.

While such initial rules appear to be highly simplistic, they are meant to illustrate what we believe is one of the major issues of qualitative inquiry; that is, a rationale for arguing that qualitative findings can be justified by an appeal to **some** type of standard. To put the issue in another context, one may think of it as being concerned with the broader question of what the term "evidence" really means? (Miller & Fredericks, 1992). The term evidence is highly ambiguous but yet very central to the research act itself. Its ambiguity may be illustrated through a metaphorical phrase such as "the weight of the evidence." Now, if applied to qualitative inquiry, what meaning(s) could be attributed to the phrase? One, of course, would be a type of summative interpretation, whereby a case is made for there being more positive-evidence instances for a claim. However, this construal begs-the-questions of how one is to determine a positive evidence-instance (Rules 1 and 2?), how many are necessary and/or sufficient for the claim, and how (if present) "negative" or "contrary" instances should be handled? On this last point, one view (Miller, 1987) would involve incorporating the negative instance(s) into the claim being made by either broadening or narrowing its scope. However, an alternative interpretation would have the claim being "disconfirmed" in the presence of one or more negative instances.

It may also be noted that this issue remains if an appeal is not made to an *a priori* claim or hypothesis but to some notion of "grounded theory" (Strauss & Corbin, 1990) or an "emerging" hypothesis. That is, in cases where the researcher opts for an "inductive" approach to data gathering and data interpretation, the problem of determining the "weight" of the evidence, in the "cumulative" sense, remains. All of this, of course, is related to the issue of avoiding the qualitative counterpart of the "error" mentioned previously. Here it would seem that having "more" positive evidence-instances would at least constitute a *prima facie* case for "confirmation," but such a conclusion would at best be tentative until the issues of "how many" instances, the existence of negative instances, and

the possibility of avoiding the fallacy of affirming the consequent were adequately addressed.

Pursuing our "weight of the evidence" metaphor, a few additional comments may be relevant here. A further interpretation of "weight" suggests that some **type** of evidence is "better" or "carries more weight" than another. This is a type of comparative analysis where **different** qualitative data-instances are compared and a judgement made (then) as to which is more "important" or has more "weight." In this scenario, one may notice that there is an implication that some form of triangulation (Patton, 1990) is being used. In the increasingly common situation where some type of triangulating strategy is employed, the determination of appropriate "weighting" decisions, and the rules governing them, become problematic. For example, if the qualitative researcher opts for a "mixed-methodological" approach, such as between-methods triangulation, a series of important considerations quickly present themselves:

1. What particular qualitative and quantitative methods were chosen and why?
2. Will the qualitative be given priority over the quantitative, or vice versa, and if so in either case, why?
3. Can the data-instances (*i.e.*, the findings) produced by the two methods be meaningfully compared or contrasted, and if so, on what grounds?
4. Will the methods be applied to similar or differing parts of the research study? For example, if some notion of "social class" is relevant for the investigation, will the concept be addressed **both** qualitatively and quantitatively?

What we are trying to point out is that qualitative inquiry has not consistently raised or addressed these kinds of concerns. However, in our view, it is exactly these (and other) questions that need to be looked at if some type of defensible context of justification is ever to be developed for qualitative research. For example, on the issue of triangulation, we can quickly see how the areas of "evidence" and "rules" overlap in complex ways. Using the between-methods example, there is a need to create a "logic" (Miller, 1983) for this approach both in terms of "design" and evaluation. A qualitative researcher may, for instance, decide to use a "standardized" open-ended interview schedule to gather data but also believes that it would be useful to have information concerning "ability" by-way-of some type of "IQ" test. This would constitute the "design" aspect of the study.

The evaluation aspect of the study would involve a rationale for justifying this between-methods approach. For example, the use of the standardized IQ test might be used to generate a matrix (Miles & Huber-

man, 1994) whereby comparisons are then made to assess the qualitative findings. Here, however, the quantitative data (*i.e.,* IQ scores) are employed in a "secondary" sense in terms of generating categories for the analysis of the qualitative data. Thus, in terms of Rules 1 and 2, previously mentioned, the qualitative researcher would need to state up front what claim(s) he or she was investigating and, specifically, how the particular triangulation strategy was to be employed in the study. Again, we are suggesting that it is this lack of clarification that makes many qualitative studies difficult to assess adequately.

Returning to the issue of rules for some notion of qualitative confirmation, it becomes quickly apparent that there are no such rules covering triangulation. To formulate such rules would be difficult, but not impossible. Below are a few additional rules covering some aspects of triangulation:

Rule 3: The decision to use any type of triangulating strategy must be stated explicitly.

Rule 4: Given any triangulation strategy (*e.g.,* between methods), the data generated by each method must be shown to be (even broadly defined) valid and reliable.

Rule 5: The data-instances generated by the two methods must be specified as to how they will become evidence for the claim, research question, or hypothesis.

Corollary 1: In general, the two data sets must be "compatible," *i.e.*, non-contradictory in respect to one another.

Corollary 2: Taken separately or collectively, the data-instances from both sets should entail the development of the claim, research question, or hypothesis (by Rule: 2).

Rule 6: If (as above) one aspect of the triangulating strategy is to be "primary," this must be indicated beforehand.

Additional Considerations

The "rules" proposed thus far are simply meant to illustrate the fact that the practice of qualitative inquiry is imbedded in more complex issues both practical and epistemological. We are not advocating that the rules-perspective given here ought to be the foundation for carrying out qualitative research; rather, we are suggesting that this approach may constitute the beginning point of a certain type of "self-reflexiveness," one that attempts to answer the question, "how do we **know** our evidence is sufficient (and possibly necessary) for the question," but one that is

fundamental for defining a context of justification for qualitative inquiry.

The complexity involved in trying to answer the question above can be further illustrated by briefly returning to the issue of triangulation. For example, triangulation by "theory(ies)" remains (for us) highly ambiguous. Leaving aside the important issues of theory definition (Glymour, 1980) and the related topics of underdetermination, incommensurability, and theory-ladenness (Fuller, 1988; Miller &Fredericks, 1991), it is not clear in exactly what manner this type of triangulation can be applied concerning the areas of evidence, rules, and the context of justification. Some of the central questions here can be summarized as follows:

1. Assuming triangulation by theory minimally means choosing two "theoretical perspectives," in what sense are they to be utilized?
2. In what (logical) relationship are the theories to stand in relationship to one another?
3. What sort of evidence do they constitute for the question or claim under study?

For example, in (1), is one theory (or the other) to be used to set the parameters of the qualitative study, while the other is to be used to "support" the findings of the study? Another alternative may be to suggest that **both** theories are to be used to "support" the findings. However, how this is to be done remains unclear. Concerning (2) above, one would assume that the theories chosen are in some sense "compatible" with each other (*e.g.*, non-contradictory?) or "relevant" to the question under study. In principle, these could be useful criteria but they are simply not clearly articulated in qualitative studies. Conversely, if some notion of "generalizability" is important for the investigation, perhaps it would be useful to attempt to show that "contradictory" theories (*e.g.*, Marxism and Structural Functionalism) are both "compatible" with the findings, or that one is more persuasive than the other. Finally, in (3), and related to (1) and (2), it is not clear what "evidence" is generated by this method of triangulation. For instance, are the theories supposed to generate data for use as eventual evidence, or, in an *ex post facto* way, are they to be used to confer "legitimacy" on the interpretation of the findings? Again, these are all plausible alternatives, but there seems to be no consensus by the qualitative research community as to the range and scope of application. The need is to start thinking about what sorts of "rules" may apply to such situations, such as:

Rule 7: Any type of triangulating strategy must be specified and "justified," *a priori*, in a qualitative study.

Rule 8: Any triangulating strategy must be specified as to how it relates to data becoming evidence for the study.

We readily acknowledge that there are many difficulties with articulating such "rules" for qualitative inquiry. Some may see the effort as a return to an undesirable type of positivism which attempts to reduce the insightful nature of qualitative inquiry to a series of rigid *a priori* rules of "confirmation." Our response is that the issue of "confirmation" is a perfectly general one, meaning that **any** research approach must provide a justification not only for its methods but also for handling its version of "errors." For the qualitative case, this amounts to answering the fundamental question: "how **does** qualitative evidence directly support a given claim?"

This question is, of course, a part of the larger issue of validity. Maxwell (1990, 1992), for instance, has provided some very useful insights on how the "validity question" might be approached for qualitative inquiry. He indicates (1992: 286-292) that there are three types of validity appropriate for qualitative studies: descriptive validity which accurately reports what the researcher has seen or heard; interpretive validity which employs an "emic" perspective in the sense of using the subjects own categories for understanding their behavior; and theoretical validity which attempts to formulate a defensible theoretical interpretation of the phenomenon. Drawing in part on the work of Runciman (1983), Maxwell's work is useful because it draws attention to the crucial notion of validity in all research work, and especially in qualitative inquiry. While sympathetic to Maxwell's views, our own approach is somewhat different. By stressing the need for "rules," we are not only suggesting that qualitative researchers **create** typologies, such as those concerning validity, but also specifically show how they ought to be employed in the research act itself. Thus, even if all of Maxwell's types of validity are utilized (and, again, we do not know if one is sufficient, or two), there are still no rules of how, for instance, these three types of validity relate to the "evidence condition" mentioned previously. It would seem that an explicit defense of one or all types of validity for a given study would in itself provide a justification for data-instances becoming evidence-instances; but, again, there are no explicit rules here.

A further criticism to our view would concern such things as the *ad hoc* nature of such rules, or their specificity or generality, the possibility of creating too many, and the necessity (if they are formulated) of holding the researcher responsible for applying **all** of them in a given study. While such objections are, once again, relevant, what we are arguing for is simply a recognition by the qualitative research community that the

central problem of "qualitative confirmation" remains. Put differently, it is a call to begin a systematization of **some** possible rules or guidelines for the context of justification. In a very rough way, the attempt would be similar to the "rules of evidence" that exist in the field of law (Lampert & Saltzburg, 1978). Of course, qualitative evidence rules would not need to be codified to the extent that rules of evidence are in the field of law. Nevertheless, a type of "codification" for qualitative inquiry would need to address more specifically such issues as triangulation, validity, evidential "weight," "falsification" or "disconfirmation" by negative evidence-instances and so on. Thus, in terms of specificity, it would be more useful to have a "rule" (and, perhaps, corollaries) which would address the limits and possibilities of, for instance, "between methods triangulation," rather than a very general rule which states that triangulation (of whatever kind) should be used in qualitative studies. Although the number and range of rules might initially vary considerably across the qualitative research community, this does not mean that **some** consensus on **some** rules would be impossible. The more general issue, however, is the need to sensitize qualitative researchers to the fact that their enterprise could be strengthened by a beginning dialogue which considers "rules" rather than "paradigms" as the relevant unit of analysis.

Some Final Considerations

Since our insistence on formulating rules for qualitative inquiry might appear to be too dogmatic and *ad hoc*, we would like to suggest an "intermediate" strategy. We see this strategy as an extended form of "discourse analysis" in which the qualitative researcher provides her or his own justification for a given research act. Such a justification would be related to, but go significantly beyond, the traditional discussions concerning literature reviews and methods. Specifically, this approach would encourage the qualitative investigator to raise and address questions that relate to how qualitative data **become** evidence for a claim, research question, or hypothesis. The raising and addressing of such questions would constitute a type of "intersubjectivity" by which to assess qualitative studies. In a related sense, this approach would also, very broadly, provide a "falsification-criterion" and thus a possible context of justification for qualitative findings. Such a "self-reflexive" approach might be framed by the following types of questions:

1. Have I clearly discussed why I chose this (these) method(s) over others?
2. Have I sufficiently addressed how I perceive my data become

evidence for my claim(s)?

3. If more than one data-set (source) is used in my findings, have I sufficiently clarified how they relate to each other and then to the claim I am making?
4. In the above, what specific claims have I made for reliability and validity?
5. Have I sufficiently addressed potential or actual threats (*i.e.*, counter claims) to my findings? That is, has there been any systematic attempt to "disconfirm?"
6. Have I sufficiently addressed commonly used and ambiguous terms/phrases such as "it seems that," "it depends on," "perhaps," etc.?
7. Have I clearly showed how the "related" literature is truly related to my claim?

The intent of these questions would be to develop an explicit mind-set among practicing qualitative researchers to think about and address issues that bear on the problem of the context of justification. Such questions could be refined, expanded or narrowed, but they are all directed towards enhancing a critical attitude about the qualitative research act. Admittedly, such an approach would lengthen the "report-age" of any qualitative study, but the benefits, we believe, would outweigh this problem, whether the questions were addressed within the context of the study or in a "technical" appendix.

Likewise, the threats to "personal autonomy," "creativity," "insightfulness" or "sensitivity" of such an approach would be minimal to either the investigator or the purpose of qualitative inquiry. Whatever claims qualitative inquiry makes as to its uniqueness as a "form of life," it is still an activity whose major function is to provide a credible (*i.e.*, broadly "scientific") account of human actions. To say that this can be accomplished only if there is some specification of and consensus about "rules" in no way detracts from the uniqueness of qualitative inquiry. In fact, its uniqueness can only be justified to the extent it clearly articulates its own standards.

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John Dewey's Concept of Causation in Instructional Practice

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For the past 25 years I have taught my students the necessity of founding teaching practice in philosophy and psychology. Although my remarks here will be directed toward the necessary relationship between philosophy and education, I want to make clear my conviction that teaching practice is necessarily fused to both.

As teachers endeavor to make sense of life and to figure out how to explain it to children, all too often they seem to shy away from the tools of the philosopher, perhaps because to some it suggests an intellectual study so esoteric, so intellectual, so complex, so distant from practical life, that it has little to offer the practical world of the teacher. Indeed, many core programs in American undergraduate education do not require even one course in philosophy and most teacher education programs, if they have even one course in philosophy of education, have no more than that. Without straying too far from the point here, I only want to suggest that, unfortunately, many teacher education students do not have the opportunity to find out whether philosophy has any worth, practical or otherwise, since so many have little or no opportunity to take courses in philosophy.

Yet, I remain convinced the practice of education cannot successfully stand alone separate from philosophy and psychology and retain any real sense of stability. Both provide theory for the practice of education while the practice of education, in turn, provides the evidence to validate the theory. Both theory and practice are important to each other, since one without the other places a workable educational program solidly on the

shoulders of chance.

To elucidate a conviction that sound teaching practice is fused to philosophy, I propose to investigate one problem in this paper, namely, the problem of causation, a problem that has troubled philosophers and educators for centuries. My focus is not to attempt to settle the issue of causation theory here, but rather, to show that teaching practice is indeed fused to causation theory and that understanding the relationship might improve the quality of instruction in the classroom. To that end, I will suggest John Dewey's theory of causation offers important practical suggestions for improving classroom instruction.

Dewey, writing in the *Cyclopaedia of Education,* said that "it is not important for educators to adopt any one of the various philosophic interpretations of causation."[1] He went on in that same place to qualify his statement to suggest the importance of the theory of causation to teachers. Dewey made his most profound statement on causation and instruction when he wrote:

> Teachers, however, have to take full account of the fact that modern science is based upon the principle of continuity of change, or process, and have to promote in pupils the habit of looking at and interpreting all subject matter from this point of view. The chief obstacles which have to be overcome are the tendencies to look at things as isolated and hence static, and to connect things on grounds of sense rather than evidence, and (often encouraged by textbooks, as a survival of the scholastic interest in formal cases) to consider intellectual demands satisfied when definitions and formal classifications have been learned. **Insight into processes of causation affords assurance of independent intellectual progress, and represents the goal of educational procedure on its intellectual side.**[2] (Emphasis mine)

It is clear from this statement that Dewey thought teachers need an insight into causation theory if they are to understand independent intellectual progress in themselves and in their students, as well as to understand the intellectual goals of educational methodology both in theory and in practice. At this point, I turn to an investigation of Dewey's theory of causation.

Dewey's Causation Theory

There is no time here to analyze nor to compare and contrast various concepts of causation with that of Dewey's. Such an undertaking would require volumes. Rather, I propose to begin this section of the paper with an investigation of Dewey's theory of causation by attempting to answer a simple question, namely, "What did Dewey mean by cause and effect?"

In the next section, I shall deal with Dewey's suggestions for dealing with cause and effect in the classroom.

Dewey explains that reference is made to causation "only when there are grounds for doubt as to whether the spatio-temporal linkage in the case of some set of events is such as in fact constitutes an existential continuum."[3] This can best be explained by example. A body has been found on the ground outside a multi-story hotel. Contemporary societal laws demand an answer to how the person died. A brief examination indicates the condition of the body is such that it fell a rather considerable distance. But, a brief examination is not good enough. Many questions are immediately raised. How far did the body fall? Did the fall occur as the result of an accident or was the person pushed to his death. Indeed, was the death attributable to the fall? Or, was the person dead before the impact? A heart attack perhaps, or is there evidence death occurred as a result of some other means and the body thrown off the building? Perhaps, death occurred some other place and the body was relocated to the spot where it has been discovered.

In the above example, reference is made to causation when we ask the question: "What caused the death?" Now, Dewey says, "The problem is to connect it with other events so that it becomes an integral part of a more extensive history."[4] At this point, Dewey notes two definitions of causation. A common sense explanation would be that the fall, the cause, produced the person's death, the effect. A scientific explanation, however, not accepting a mere common sense answer, would seek "a set of interactions, each one of which is so minute that it is capable of uniting with others to form a continuous coexistential-sequential whole without gaps and interruptions."[5] To better explain Dewey's concept of causation, common sense causation will be contrasted with scientific causation.

Common Sense Causation

Dewey tells us that everyday life abounds with common sense causation statements. Most of us have heard such statements as these: "rain makes the grass grow" and "flipping the switch causes the lamp to light." "The fall caused the person's death." One can supply countless examples of common sense causation statements that we hear and use daily, so many, in fact, we can almost say we live in a practical world of common sense.

Hume, Dewey said, resolved the entire concept of causation on common sense generalizations. Dewey, however, thought the problem with common sense causation is that it is not about temporal sequences, it is about two gross temporal events: the cause and the effect. He

suggests it is faulty reasoning to argue that a gross temporal event **cause** produces a gross temporal event **effect** because there is an inappropriate time gap between the two events. Let me return to the above example of a person falling to his death. A common sense statement would be: "The fall caused the person's death!" Dewey would say of the event, the fall: "Examination shows that this event is not temporally antecedent, leaving out the matter of its being **the** antecedent."[6] The mere fall is not sufficiently close in temporal sequence to be a cause of death. After all, several parachutists, for example, whose "chutes" did not open, have survived falls of great distances. For causation to be meaningful there must be a definite linkage between the cause and the effect, in this case the fall and the death. No separation can be made between cause as antecedent and effect as consequence since both are a part of a larger continuous reality. Dewey is correct when he writes:

> [existentially] cause and effect are on the same level; they are portions of one and the same historic process, each having immediate or esthetic quality and each having efficacy, or serial connection. Since existence is historic it can be known or understood only as each portion is distinguished and related.[7]

It is important to note that once the cause of death has been ascertained, that is not the end of the matter. A family must be notified; a will must be probated, and on and on. The point is **we** lift out of the existential state in which events occur and **we** assign a cause and its subsequent effects to determine what happened between two points in time. Clearly, however, common sense causation does have its value here, namely, to identify and to limit the two gross events we call cause and effect. But for Dewey, "the gross event directly perceived can be understood only through its resolution into minuter events (interactions) so that some of the minuter events become constituent elements of a spatial-temporal continuum."[8] In the case of the death above, it means that care must be taken that the gross event of the death is not treated as if it were caused by another gross event, a fall. In other words, there must be determinations of causal linkages with other similar linkages that will produce a single continuous history. In this respect, common sense is inadequate in such determinations. We must look to another concept of causation.

Scientific Causation

Sometimes when people interpret causation in common sense terms of gross cause producing gross effect, they explain the time gaps as the actions of a mysterious force. For that reason Dewey said:

> The match was supposed to have a certain calorific power. Similarly, a living body was said to die because the vital spark, or some life-giving force, had fled. Finally, forces were generalized. The force of gravity caused things to move downwards; that of levity caused them to move upwards; the force of electricity caused rubbed pieces of amber to attract pieces of paper; the force of magnetism enabled a magnet to attract iron, etc. The idea of forces is indeed so deeply embedded in popular culture beliefs that it is needless to give examples.[9]

According to Dewey, only by using scientific inquiry can temporal gaps be reduced, which will in turn eliminate the explanation of forces. He suggests this be done by employing two kinds of propositions as instruments to determine causation, namely, universal formulae and propositions of kinds.

Universal Formulae

Universal formulae is defined as a non-existential and therefore nontemporal relationship of characters preferably written in the form of a mathematical equation, that can be employed as a formula by which a particular form of generalization or law can be made, namely, a **universal proposition**. I must stress once again that in itself the universal formulae is not a law; rather, it is only a formula by which a generalization or a universal proposition can be made. Examples of this would be mathematical formulas for gravity, electromotive force, and nuclear force. The universal proposition is of the if-then variety and suggests a causal relationship. That is to say, if such and such occurred, then these consequences must follow. As mentioned before, this kind of proposition is nonexistential and therefore nontemporal in content and is used to limit and define cause and effect, as well as to help suggest reductions in temporal gaps of causal relationships.[10]

Propositions of Kinds

The second type of proposition used to help determine causation Dewey calls the proposition of kinds, an existential proposition that refers to actual conditions as determined by experimental observation. This proposition amounts to a determined set of interactions the result of which is a law stating a relation of traits that describe a particular kind. The traits are logically conjunctive disjunctive, no element of sequence in their relations to one another can be found.[11] Examples of this abound in science and medicine. Such concepts as pneumonia, basal metabolism, and diabetes provide only a few examples. Scientists familiar with these concepts know that it took many years of research to

substantiate their meaning. Now, however, once they have been accepted as valid conceptual structures or standards, scientists and medical personnel can draw propositions from those concepts that amount to predictions to solve particular problems.

A return to the example above of the body found outside a hotel will help. Because of the circumstances surrounding the death, societal law demands an answer to the cause of death. An autopsy will be held. The examiners will look for signs that might lead to some proposition as to guide and direct the inquiry. Because of medical knowledge of the condition of a body resulting from a fall, from a heart attack, from drowning, from a gunshot wound, and on and on, examiners can search for clues that suggest death resulted from some particular event. By using the universal proposition, gravity, the examiners can say: "If a person were to fall, or jump, or be pushed from a distance above the ground level, then that person would fall to the ground." Next, suppose the condition of the body suggests a proposition of kinds that "death resulted from the consequences of a height of at least a seven-story building." Once that proposition of kinds has been made and the subsequent factual evidence bears out the proposition, the causal relationship surrounding the death has been established. We know how the person died. But, that is not the end of the matter. New questions arise? Was the death the result of an accident? a suicide? a murder? New inquiries must be made. New causal relationships established. New universal propositions and new propositions of kinds must be used to resolve the new inquiries. And, as a result of those inquiries, new knowledge will be made, perhaps some negligible, perhaps some dramatic. It is in this fashion our body of knowledge, based on factual evidence that resolves some inquiry, continues to grow at an ever increasing rate.

Science has constructed many conceptual standards that permit propositions to be formed that can act as predictive statements, generalizations, or **laws** that guide and direct inquiry that will lead to solving of some particular problem. While Dewey suggests both forms of generalizations or propositions above are laws, he gives the term "law" a specific definition. He suggests that scientific laws are not measurers of truth, but are used as tools or instruments which the inquirer can employ to eliminate temporal gaps in a causal relationship. Thus, rather than each individual case being determined by some law, each "individually observed case becomes the measure of knowledge."[12] Dewey goes on to say:

> Laws are intellectual instrumentalities by which that individual object is instituted and its meaning determined. This change involves a reversal of the theory which has dominated thought since the Newtonian

> system obtained full sway. According to the latter, the aim of science is to ascertain laws; individual cases are known only as they are reduced to instances of laws.... In technical statement, laws on the new basis are formulae for the prediction of probability of an observable occurrence. They are designations of relations sufficiently stable to allow phenomenon is individual—within limits of specified probability, not a probability of error, but of probability of actual occurrence.[13]

For Dewey, then, the functional value of scientific laws is partially recognized when it is said that they are the means of prediction. However, it is not enough for laws to be a means of prediction, the predictions must be accurate. Further, the prediction does not become "a warranted proposition until the required operations are performed and are found to have as their consequence the observed material whose occurrence has been predicted."[14] I need to make as clear as possible here, however, that Dewey is not referring to fixed laws of nature waiting "out there" to be discovered that will, once known, produce accurate predictions. Neither is he searching to replace "deterministic laws" with "probabilistic laws" that suggest a similar closed world. Dewey's reference to "laws" are really references to generalizations used as "intellectual instruments" that, once made, will work for a while in a given domain. The length of time they "work" cannot be forecasted here. One can only say that they "work" until they are found to be inaccurate, and, therefore, need to be replaced by more accurate "laws."

Once the two generalizations or laws above have achieved their goal and the "institution of individual situation which is temporally and coexistentially continuous is attained, the conception of causation has served its purpose and drops out."[15] For Dewey, then, causation as ordered sequence is a **logical** category in the sense that it is an abstract conception of the infinite number of existential sequences which are settled in scientific inquiry by the use of generalized propositions as laws.[16] This means, then, that causation amounts to an intimate interaction between epistemology and metaphysics. More specifically, it means causation becomes meaningful and understandable only when logical inquiry into some problem of life is successfully completed. In this way, Dewey means that it is a logical, not an ontological category, or, to say it another way, causation occurs in inquiry not in an *a priori* or Kantian sense.

Dewey's Concept of Causation in Instructional Practice

Since it has been shown Dewey's concept of causation is found within the logical thought of inquiry, it must now be asked how that concept of

causation is consistent with his instructional thought. A good place to begin is with the article above from the *Cyclopaedia of Education* on causation and instruction, a statement that ties both concepts together. Dewey's premise in the article under consideration here is the following:

> Teachers, however, have to take full account of the fact that modern science is based upon the principle of continuity of change, or process, and have to promote in pupils the habit of looking at and interpreting all subject matter from this point of view.[17]

He is reminding teachers here that we live in a continually evolving universe which seems to be going in no discernable nor teleological direction. Although change or process is the "real world" in which we live, he suggests that mankind is not left entirely to the whims of chance in either our biological or social orders. By developing the habit of using our intellects both individually and collectively, we can make decisions that will, with some degree of probability, send our futures off in some desired direction. In this manner we have some control over our own destiny. Teachers have a real responsibility to insure that their students approach subject matter from this point-of-view.

Second, he goes on to tell teachers they must overcome the three chief obstacles to change or process-oriented reality in their classrooms. Those are as follows: the tendency to look at things as isolated and hence static; the tendency to connect things on the grounds of sense rather than evidence; and, finally, the tendency to consider intellectual demands satisfied when definitions and formal classifications have been learned.[18] Clearly, he is suggesting to teachers that their approach to education must reflect a metaphysics of process and change, not an education reflecting a static and fixed pre-Darwinian, Aristotelian universe. To that end, science has shown us that we should use factual evidence as a basis for agreement upon what is truth, and, consequently, he believes, we should continue to abandon a belief in a concept of absolute, unchangeable Truth that was reflective of the pre-Darwinian world. In the classroom, once students learn definitions and formal classifications such as the multiplication tables or the phylum, Dewey says, teachers should require greater intellectual demands than merely the memorization of additional subject matter. They should encourage, guide and direct their students to resolve problems that come from life's troublesome situations. More will be said about this later.

Finally, Dewey says to teachers: "Insight into processes of causation affords assurance of independent intellectual progress, and represents the goal of educational procedure on its intellectual side."[19] What he meant by that will require some explanation.

Since he was talking to teachers, he was referring to the importance of their developing insights into the processes of causation that will provide assurance of independent intellectual progress and their sense of developing proper goals of educational procedures or methodologies that will create the best learning situations for their students. He also means teachers need to have proper insights into the processes of causation since they must insure their students grasp those insights as well. We can get a bit more understanding of what he means here from *How We Think.*

Dewey wrote the following in *How We Think:* "The problem of the pupils is found in **subject matter**; the problem of teachers is **what the minds of pupils are doing with this subject matter.**"[20] The statement, "The problem of the pupils is found in subject matter," has a dual meaning. First, it means the obvious, namely, students must learn subject matter. The second meaning, however, is not as apparent as the first. It picks up on the words "must learn" as being a reference to a learning process, a method of knowing subject matter. That learning process, according to Dewey, begins with thinking, and, as such, is where the problem of the pupils is located.

Dewey stated clearly in many of his writings, but particularly in *Logic,*[21] *How We Think,*[22] and *Democracy and Education,*[23] that **thinking can only begin from problems that arise in actual, real-life situations**. That statement cannot be emphasized enough. Educators must follow that principle by working to create real-life troublesome, frustrating, problematic classroom situations which, in turn, lead directly to "practical" problems students will resolve in such manner as to produce desirable consequences, consequences that include student mastery of both factual subject matter and socially acceptable behavior. Dewey suggests that if the teacher has been successful, student interest in their work will be so intense that they will have both lost themselves in it and they will have found themselves in it.[24] Then, just as the investigators did in the examples above, students, with the guidance of the teacher, use universal propositions and propositions of kinds to lay the problem to rest. In effect, they become researchers using the same theory of causation in their search for facts as occurs in any scientific investigation. Teachers, of course, realize these facts are the subject matter students are to learn. Students, on the other hand, realize these are not dead facts learned or only memorized from some textbook, but are, instead, facts that come alive in the resolution of **their** real-life problem through inquiry. This is what Dewey means when he says "The problem of pupils is found in the subject matter," and what he means when he says teachers must have insights into the processes of causation

that will provide assurance that their students are developing independent intellectual progress, a concept extremely important if students are to become independent thinkers once they graduate.

Thus, the inquiry method of instruction teaches students the method of logic, including a concept of causation as a logical affair, as well as teaches them that they must attend to resolving real-life problems logically, a process central to their learning to build the rational, humanistic, democratic social order in which he so much believed and described in such places as *School in Society and The Child and the Curriculum,*[25] *Schools of Tomorrow,*[26] *Democracy and Education,*[27] *A Common Faith,*[28] and *Theory of the Moral Life.*[29]

Dewey also told us that the second problem, the teacher's problem, is understanding what the minds of pupils are doing with the subject matter. In order to do that, the teacher must know the appropriate subject matter students are to learn. In fact, the teacher must know it so broadly and deeply that he or she can move in and out of it without difficulty. He tells us:

> This should be abundant to the point of overflow. It must be much wider than the ground laid out in textbook or in any fixed plan for teaching a lesson. It must cover collateral points, so that the teacher can take advantage of unexpected questions or anticipated incidents. It must be accompanied by a genuine enthusiasm for the subject that will communicate itself contagiously to pupils.[30]

Dewey thought the reason teachers need an "excess supply of information and understanding" is not always recognized. "The teacher," he said, "must have his mind free to observe the mental responses and movements of the student members of the recitation-group."[31] He went on to write:

> Unless the teacher's mind has mastered the subject matter in advance, unless it is thoroughly at home in it, using it unconsciously without the need of express thought he will not be free to give full time and attention to observation and interpretation of the pupils' intellectual reactions. The teacher must be alive to all forms of bodily expression of mental condition—to puzzlement, boredom, mastery, the dawn of an idea, feigned attention, tendency to show off, to dominate discussion because of egotism, etc.—as well as sensitive to the meaning of all expression of words. He must be aware not only of **their** meaning, but of their meaning as indicative of the state of mind of the pupil, his degree of observation and comprehension.[32]

For Dewey, the teacher's problem is centered to a great extent in the behavior or the psychology of children. For that reason, such questions as the following become relevant: Why are these students interested in

the situation I am creating and those are not? What must I do to bring them into the situation? Why does Mary appear lathargic again today? John appears eager to resolve the problem at a much deeper level than the other children. What can I do to continue challenge him without losing the others?

Dewey suggests that teachers resolve their problem in the same manner as any other causal question is resolved, namely, through the method of science. It includes insight into processes of causation because those processes "represent the goal of educational procedure on its intellectual side."

Summary and Conclusion

This paper has clearly shown the following:

(a) Dewey's causation theory amounts to an intimate interaction between epistemology and metaphysics. Particularly, it means causation becomes meaningful and understandable only when logical inquiry into some real problem of life is successfully completed.

(b) In an educational setting, Dewey assigns the teacher the task of creating a problematic environment in the classroom that will, in turn, engage students in a process of inquiry that will lead them to desired knowledge, including learning the system of logic that produced that knowledge. Dewey's causation is a part of that logical process. For that reason, Dewey's system of logic, which includes his causation theory, offers some real suggestions for improvement of instruction in the classroom.

Notes

1. John Dewey, "Causation," in Paul Monroe (ed.), *A Cyclopaedia of Education*, Vol. 1 (New York: The Macmillan Company, 1911, 1925), 554.
2. Ibid.
3. John Dewey, *Logic: The Theory of Inquiry* (New York: Holt, Rinehart & Winston,. 1938), 446.
4. *Ibid.*
5. *Ibid.*
6. *Ibid*, 451.
7. John Dewey, *Experience and Nature* (La Salle, IL: The Open Court Publishing Company, 1925, 1965), 92. Dewey also discusses this matter in "The Superstition of Necessity," *The Monist* (April 1893), 362-379.
8. Dewey, *Logic*, 449.
9. *Ibid*, 450.
10. George C. Stone, "John Dewey's Principle of Causation," *Social Science* 49,

(1974): 210.
11. Ibid.
12. John Dewey, *The Quest for Certainty* (New York: Minton, Balch, 1929), 205-206.
13. Ibid.
14. Dewey, *Logic*, 456.
15. Ibid.
16. Ibid.
17. John Dewey, "Causation," *A Cyclopaedia of Education*, 554.
18. Ibid.
19. Ibid.
20. John Dewey, *How We Think* (Boston, MA: D.C. Heath & Company), 275.
21. Dewey, *Logic*.
22. Dewey, *How We Think*.
23. John Dewey, *Democracy and Education* (New York: The Free Press, 1916).
24 Ibid, 126.
25. John Dewey, *The School and Society and The Child and the Curriculum* (Chicago: The University of Chicago Press, 1900, 1902, 1990)..
26. John Dewey & Evelyn Dewey, *Schools of Tomorrow* (New York: E.P. Dutton & Co., 1915).
27. Dewey, *Democracy and Education*.
28. John Dewey, *A Common Faith* (New Haven: Yale University Press, 1934).
29. John Dewey, *Theory of the Moral Life* (Chicago, IL: Holt, Rinehart & Winston, 1908). This book is a reprint of Part II of John Dewey & James Tufts, *Ethics* (New York:. Henry Holt & Co., 1908), 201-424.
30. Dewey, *How We Think*, 275.
31. *Ibid*.
32. *Ibid*.

The Naturalistic Education Theory: In Search of a Unified Learning Theory for Instructional Methodology and Tactical Education

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Introduction

Learning theorists have been squeezed between the neurophysiologists and the teacher practitioners who have pressured the theorists to formulate a plausible, working mechanism that explains how one learns and to show how this explanation can be made useful in the engineering of learning experiences. The pressure has increased tremendously as society uses education as its scapegoat for a multitude of maladies.

Those of us caught in the middle as curriculum engineers and teacher educators feel very uncomfortable, experiencing mounting philosophical doubts and lack of confidence in our products. We are aware of the absence of a coherent, systematic approach to instruction founded on accurate philosophical premises that lead to effective classroom practices (Piaget, 1970a, 1970b; McKenna, 1972). As we thrash around trying to educate students, the need for a Unified Learning Theory for Instructional Methodology And Tactical Education (ULTIMATE) becomes apparent.

As educators, we see ourselves much like the particle physicists in search of a unified field theory. We have many proposed learning theories, but they do not adequately explain how students learn in the most efficient manner or the instructional processes that promote learning in a holistic manner. Like the physicist, we too can add another particle, or piece, or program, or activity, or curriculum, or evaluation measure, or responsibility, until we have so many particles and pieces

with nowhere to place them and nothing to do with them but name them and construct an artificial hierarchy that appears systematic. In the physicists' lexicon, there are bosons, femicons, hadrons, baryons, leptons, mesons, nucleons—all with smaller particles such as muons, tauons, pions, kaons, etas, photons, gravitions, gluons, quarks (up, down, bottom, top, charmed, strange, truth, beauty) and on and on, not to mention the supersymmetry hypothesis that states that there are mirror particles of all those mentioned, and more. And yet, they want to create a larger, more expensive and more powerful high-energy accelerator—to get more particles. Even though the entities are getting smaller and smaller, is our understanding getting greater and greater?

Rules and Guidelines of the Game

A rational mind, one that believes in Ockham's Razor and that the law of parsimony prevails in nature, would more likely view the universe as an analog, continity-based phenomenon as opposed to a digital or discrete, particle, unit system. If the universe is based on a particle system, then regardless of the smashing power of an accelerator, we could never exhaust the possibilities of smaller and smaller particles. Matter can always be subdivided into smaller and smaller amounts, one just needs larger and larger amounts of energy. The number of irrational hypotheses for any given phenomenon is infinite.

This same argument can be explored with the mechanism of internalization of concepts. A concept or collection of concepts can be dissected into smaller and smaller units until eventually they become meaningless for all practical purposes. They, like the particle problem, appear as digital information, particularly in the useable condition, and just like the substance of the universe, can be dissected to the point below which the components become useless and meaningless, but are still there none-the-less to tease us.

It would seem then, that although the mind and the universe, of which it is a part, are constructed on an n-dimensional, continuous, coherent basis, perhaps as a continuum of electromagnetic radiation, the operational level functions as discrete or unitized phenomena. These discrete units have their own integrity based on the degree of coherence of their energy and affect each other through the resultant energy field.

The mind, as well as all of the other components of the universe, must obey the rules of physics, chemistry, and physiology. This sounds obvious and simple, yet psychologists, educators, and theologians have historically continued to offer more esoteric explanations for how the mind works, forsaking the mechanical and supporting the mystical. Assuming

a mechanistic phenomenon, the recording and processing mechanisms of the mind must be based upon on-off, present-absent, high-low, flip-flop, excited-nonexcited, or similar phenomena. The "astonishing hypothesis" espoused by Francis Crick (1994) and the neuronal group selection theory developed by Gerald Edelman (1992) are two of the more progressive explanations of the mechanisms of brain functioning. Both explanations are chemically based at the neuron mass level and offer exciting understandings for shaping and directing learning environments. Although critically important for establishing the complete picture and assuring optimal efficacy, knowledge of the exact biochemical-physical mechanism is not essential to the application and manipulation of the traditional sensory input and processing procedures. However, the propositions offered in this thesis are congruent with the hypotheses of both Crick and Edelman.

If the mind is electro-physical and not parapsychological, then there must be an ULTIMATE instructional method that would be the most effective and efficient strategy for learning. Based on other physiological phenomena derived from basic genetics, one can assume that the mechanical variation in the internalizing system allows for either no-function or function with some degree of variability in rate. As we know, there is some variability with respect to efficiency of the sensory input mechanism from person to person, but the biochemistry/biophysics for recording, retrieval, filing, and processing would be essentially the same and it would either work or not work.

Therefore, learning can be facilitated by providing stimuli that enhance the effectiveness of the input mechanisms and that are congruent with the recording, filing, retrieval, and processing mechanisms of the brain. It is generally agreed, if not always practiced, that every possible input stimulus should be utilized for instruction of every concept or informational byte and that this should be made as individualistic as possible. Tinkering with this aspect of teaching can be very creative and rewarding. The theoretical basis for the operation and effectiveness of these techniques is known well enough for proper utilization. However, no matter how well this is done, in and of itself, it will not produce the needed increase in instructional efficiency to bring the rate of learning and knowledge base to a satisfactory level.

On the other hand, the process of internalization and utilization of information is not understood and proposed theories on enhancing learning are somewhat inconsistent and incongruent, certainly not holistic. Because of this lack of solid foundation, we see the curriculum engineers fall into the same trap as the physicists. Perhaps write another, a little more detailed, textbook...perhaps a purple version. Let's develop one

more curriculum. Maybe we could put together a national list of concepts to be learned. Let's add more body parts to the pedagogy—hands-on, heads-on, heart-on, and feet-on experiences are the ticket. Perhaps a little more discerning evaluation instrument. Let's break down the concept into smaller and smaller components. History convinces us that all of this effort is doomed. First must come the philosophical underpinnings that account for our observations on cognition. Then the strategies can be developed to address the enhancement of cognition. What approach can be employed that takes into account the physics, physiology, and chemistry of the brain and is in harmony with observations of what appears to be effective instructional strategies and learning behavior?

An Instructional Theory Hypothesis

Philosophers of education have attempted to develop comprehensive theories of education that lead to pragmatic methods of efficient instruction. The first inclusive, systematic approach was espoused by John Amos Comenius in 1623. He stated that:

> We are so bold as to promise a *Great Didactic*...a complete treatise on how to teach all subjects to all men, and how to teach them in such a way that the result will be certain.... We shall show that all this is done *a priori*, that is to say, deriving from the immutable nature of things...and that a universal system is thus established which is valid for the institution of universal schools. (Comenius, 1623)

Although the underlying force in Comenius' theory was clouded by religion, moral, and sometimes mystic perspectives, his concept, that there is a natural index of instruction derived from experiential interactions with nature, forms the foundation for many subsequent theories. The work of Comenius was never widely implemented and restricted to some individual attempts on his part to start schools based on his philosophy of education.

In the early part of the 20th century, John Dewey (1933) led the progressive education movement following Comenius' lead. Although "progressive schools" sprang up here and there in name, few were practitioners of Deweyism in the true sense. David S. Ausubel's (1968) work stressed the significance of sequence and the critical nature of the association and interrelationship of concepts. Jean Piaget (1972) proposed that the cognitive level of the concept must be appropriate for the cognitive skills of the learner and that the educational experience be made real in the sense of direct student involvement through exploration. These learning theories have common ground that form the foundation for current thinking by the constructivists.

However, something seems to be lost in the translation of the learning theories of these philosophers into the pragmatic setting of the classroom. What is missing? Perhaps what we have not been able to derive from these proposals is a straight forward mechanistic learning theory, one that makes biological and pedagogical sense, is easily interpreted, and leads to pragmatic postulates and reasonable mechanisms of implementation in the classroom.

What is the unifying theory that can be used to tie these ideas together in a holistic approach to the science of education?

One of the beauties of nature is that it appears so complex but yet is governed by simple principles—a complex construct with non-random rules and basic elements. The Naturalistic Education Theory (NET) is a unified learning theory of instructional methodology and tactical education. NET originates with the melding together of the propositions of Comenius (1623), Ausubel (1968), Benjamin S. Bloom (1976), Jerome S. Bruner (1960), Robert M. Gagne and L.J. Briggs (1979), and Piaget (1972) into a neo-constructivistic approach. The mechanical classroom manifestation of Ausubel's learning theory materializes in the form of concept map-based lesson designs as presented by Joseph D. Novak and D. Bob Gowan (1984). Implementation of Piagetian learning theory into the classroom takes the form of the Robert Karplus, *et. al.* (1977) learning cycle.

In the NET, the philosophical bases of these strategies are amplified and extended to incorporate a learning spiral (Granger, 1987) rather then a cycle, and a historical, natural sequencing of concepts rather than a two dimensional, somewhat spontaneous knowledge Vee (Novak, Gowin & Johnanon, 1983) association of terms. NET, a historical-based natural sequencing theory (Granger, 1989), proposes that information consists of bytes which should be arranged and taught in the same order in which they were originally discovered, disregarding artificial categorization by traditional academic disciplines. This historically-based sequence sets up a learning spiral symbolizing the continuity of information bytes and their systematic linking together, web style, for a meaningful, multi-dimensional concept structure and continuous association; in other words, a four-dimensional, dynamically expanding cognitive map creating a continuous association of concepts. It is a mental construction process fueled by natural curiosity and a developmentally-based need to know. This latticed association is engineered by design, not stumbled upon by pragmatic trial and error or the artificial selection process that seems to be prevalent in the pedagogy of today. The structure and function relationships of the construct flow naturally as if the discoveries were their own architects and their revelation engi-

neered by their own processes of evolution. Together these broad principles form the NET.

If we assume the universe of knowledge is, at present, in a continuing state of expansion and development, then just as the components of the physical universe have become more complex and interrelated, but more flexible and open, so does the mind and its contents over time. In both cases, time is the fourth dimension (really should be called the first dimension, for without it there are no other dimensions) that governs the complexity of form and format of the universe and the development and incorporation of knowledge constructs in the mind.

One can not develop a holistic view of the universe by snipping out a time segment, say 10^{-10} seconds after the initiation of the universe, a.k.a. the "Big Bang," and studying leptons, for example. Likewise, to snip out a segment from the continuum of the development of human knowledge also produces only a stand-alone phenomenon that makes little sense in the context of the holistic understanding of the human experience.

This is not to say we cannot do it; we can do both. We can indirectly see traces or inferences of muons and we can indirectly identify DNA, for example, as a cloud of information floating in the mind, in its own space. Neither conceptualization is useful or explanative in its own right, even though each may exist and can be seen, albeit indirectly, that is, symbolically, because these single bytes of information will not be tied to a meaningful mental construct representing the known portion of the universe as we understand it.

Concepts developed about our universe that form our mental pictures can be likened to a jigsaw puzzle, where a single, isolated piece (byte) is not very useful in and of itself in solving the overall puzzle or yielding an accurate image of a concept or series of concepts. Some pieces are more useful than others, depending on the quality and quantity of information riding on them and the relatedness that information has to previous experiences of the puzzle solver. However, assuming uniqueness, the piece, if printed only on one side, could be oriented in a multitude of circular positions and spatially anywhere within the framework (parameters of which we might not even know) of the picture or concept to be developed. With no external clues for orientation, random choice of position could lead to a multitude of resulting perceptions and meanings of the picture, including, perhaps, an upside-down misconception. Our idea of the concept could not only be upside-down, but backward and out of context, if we were working with a four-dimensional phenomenon.

> A small error in the beginning leads to a large error in the end.
>
> —Aristotle

If you are lucky to start the puzzle with a corner piece and you have gained some operational or process skills, you have limited your outcomes to only four possible positions in context of the picture, however, overall orientation could still be highly varied. If however, the corner piece fits against or was attached to an existing, correctly oriented set of pictures, then everything would work out okay and reflect the reality of the situa-tion, at least in the context of the existing cognitive structure. The correct position in time and place for the picture would be fixed. How the original piece is laid down has a great effect on how the whole will look.

There is a reason why puzzle manufacturers have developed a continuous line of puzzles from the simplest forms to those so complex that it appears only the creator can figure out the solution. In order to capture young minds in the joys of puzzle solving the makers start with puzzles of few pieces, say three to four with easy fit connections. The pieces are large and easily handled. They have designs or pictures that are universally recognizable and the pieces fit into a frame with preformed borders, usually with a continuation of the picture or design. Unless manufacturers never want to sell another puzzle, they do not give the unskilled puzzle solver a 10,000 piece puzzle printed on both sides with a vague, low resolution picture. Of course this is a simplistic analogy, but there is a meaningful lesson here. To gain meaningful understandings, concepts must be learned in a sequence that moves over time from simple to complex. The learning spiral as symbolic representation of the NET can be thought of as a four-dimensional puzzle. By taking the time dimension into account, the NET-based engineering of the learning experience can allow for a temporal and spatial sequence of curriculum development that incorporates the natural orientation, interrelationship, and interaction of concepts and thought.

We believe quarks preceded leptons, that in turn preceded hadrons, that preceded nuclei, etc., for systematic reasons. We also know why the discovery of the cell theory preceded the understanding of mitochondria, that preceded DNA, etc. As we as organisms move through stages of understanding based on experiences, the historical sequence of instruction follows the pattern of our developmental ability to understand, coupled with the sequence of our exposure to phenomena in a need-to-know-as-we-go hierarchy. The instructional exposures are revealed in sequence based on the chronology of the original discovery experiences. Thus our growing knowledge spiral establishes our propensity and perceptiveness to recognize and internalize the existence of the next experience in sequence. Psychogenesis recapitulates chronology. The history of intellectual development is the natural architect for individual cognitive development. Natural curiosity and the need-to-know is the engi-

neer for designing the curriculum of life.

Starting at the beginning of cognitive time (t_c), the origin of the individual, where t_c=0, it follows that the origin or nucleation site of the learning spiral would be an informational byte that would be described as science. Since science or inquiry is a natural phenomenon, genetically based, it provides both the origin and backbone for the lattice of the learning spiral. The highly developed natural curiosity of the human being, honed by natural selection, is the centerpiece for intellectual development and the mechanistic base for the philosophy of science. Unlike the man-made constructs of mathematic, language, theology, etc., science is a natural behavior, essential to survival and therefore the engine for other mental constructs. Science, in its broadest definition, is the essence of our cognitive structure—both knowledge and process.

The central axis or regression line of mental tendency of each individual would be defined as a line in four dimensions with (x,y,z,t) coordinates, radiating from the same origin. The perfect state of this line representing the center of mental gravity might be expressed by the two points with coordinates (0,0,0,0), (0,∞,0,∞). The coordinates of the line can be altered by the systematic addition of knowledge in the various quadrants within which the spiral lattice exists. As the knowledge base grows and the cognitive structure develops the possibility of intercommunications between concepts increases and the interface between the known (experienced) and unknown increases. The more experiences you have the more experiences you are able to have. Affective factors open or close the possibilities of additions to the construct, in some instances causing deviation from the idealized coordinates to the extreme point of rendering the individual inoperative in typical environmental contexts.

This does not mean that everyone's learning spiral would or should look identical. In actuality, identical learning spirals would be rare. Only in the perfect state would the resulting construct be a complete, symmetrical, radiating spiral lattice. This idealized or all-knowing structure would be unlikely to exist in the human condition given our mental limitations and or temporal restrictions. However, society and the educational system it produces should shoulder the responsibility for providing each individual with the most comprehensive experiences for the development of a complete, basic mental framework, particularly during the critical, early formative years.

Cognitive Degradation

The complex structure of the cognitive spiral lattice labors under the second law of thermodynamics as do other constructs of nature. There is

a natural degradation of organization and systematic processes of the cognitive structure. According to the NET, the total construct will continue to become more complex if intellectual energy is expended to form interconnections between existing mental constructs and new experiences. Use and maintenance of existing constructs are essential for concept integrity. Reversal of the learning process or rate of decay (R_{CD}) is a function of the same parameters as construction, time (t) and space (P), thus $R_{CD}=f(t,P)$.

The outermost bytes of the cognitive structure are liable to erosion to the highest degree since there are fewer interconnections or stabilizing factors associated with them. Those innermost bytes which form the cognitive core of the spiral lattice are saturated with interconnecting ideas and processes and therefore the most stable.

Distorted cognitive structures that branch singularly from the idealized center of mental gravity enhance the possibility of erosion of other, not so well developed constructs in other quadrants. Spatially separated multiple lines or unconnected branches of the cognitive structure are more unstable than contiguous lattice structures that approach the idealized, complete cognitive spiral.

Concepts and processes have a half-life in which decay is a function of chronological origin and subsequent renewal or maintenance. The older the concept in the mental construct and therefore the more interconnections there are, the more stable the byte. In general, last on, first off. The decay rate of concept 1 compared to concept 2 is a function of time where $t_{C1}<t_{C2}$. The more frequent and current the reinforcement the more resistant to decay. Since time, in the case of NET, dictates position and position indicates time, $R_{CD}=f[t(P)]$, we can devise a mental picture for an index of cognitive decay by $R_{CD}=k_1t + k_2P_{(x_n, y_n, z_n)}$.

The principles of cognitive degradation do not preclude internal or point erosion of lattice components. Without energy expenditure for lattice maintenance, the lattice could become permeated with hollow sections or regress to multiple linear or branch structures and therefore more liable to decay. This erosion could be initiated by lack of maintenance, electro-physical factors, aging, or the incorporation of misconceptions.

Misconceptions are a problem in building the lattice in that they, just as puzzle pieces, may be incorrectly placed and yet may partially fit and interconnect with some existing cognitive structures. However, they can not make additional interconnections and form a completed harmonious cognitive element. They may even distort the whole web and influence the spatial and temporal acquisition of additional knowledge and processes. Although misconceptions are natural phenomena and are opera-

tive constructs at certain levels of human need and cognitive development, they substantially reduce the efficiency and effectiveness of the overall learning process and speed up the processes of cognitive decay.

Implications of NET

What pragmatic meaning does NET have for the classroom teacher? How can it facilitate the construction of an effective and efficient curriculum? NET has many implications associated with its premises and they can be categorized into two sets, theoretical postulates and pragmatic propositions. The mechanisms of the operation of the brain are not fully understood. However, NET is based on several postulates that are consistent with behavioral, physiological, and psychological observations.

Theoretical Postulates of NET

- The mechanisms of the brain are electro-physical/chemical.
- Mental development in human beings is predictably sequential, albeit multi-dimensional and varied in rate.
- Science, its processes and concepts, is the natural and fundamental study from which knowledge and cognitive skills grow and develop.
- A byte of information has specific coordinates that define its place in time and space and this coordinate is critical to its effective and efficient translation and establishment in a mental niche.
- Sequencing of the individual learning experience parallels the cognitive, affective and psychomotor development of the evolution of human understanding over time.
- For any individual there is an optimal size of informational byte (lattice component of learning spiral) that can be incorporated into the cognitive structure over a given segment of time.
- The potential for the rate and breadth of concept incorporation and process skill development increases over time with development and expansion of the learning spiral lattice of the mind.
- Meaningful interconnections that are formed through temporal and spatial relations exist among all subject matter concepts and process skills.
- Motivation and curiosity flows naturally from understanding and need.
- Mastery learning is an achievable goal as learners progress along chronologically-based concept/skill paths.
- The cognitive decay sequence is inverse to temporal acquisition and maintenance, and related to spatial position, and rate is inversely proportional to maintenance frequency and directly related to distance from the central core of the cognitive spiral lattice.

Assuming the theoretical postulates to be true, the adoption of NET

would lead to a set of inescapable propositions needed to be taken into consideration by the curriculum designer and teacher when engineering an educational experience for prospective learners.

Pragmatic Propositions in the Use of NET

- Curriculum engineering should be founded on a discovery-based chronological sequencing and spatial continuity of concepts and process skills.
- Learning experiences for specific concepts and associated process skills should be engineered, within the boundaries of accuracy and efficacy, analogous to the original discovery process.
- Science should form the nucleus as the underlying theme for curriculum construction.
- The whole of the educational experience should be integrated, throughout the body of knowledge.
- Learning experiences should be developed, sequenced, grouped, and delivered according to the cognitive developmental stages of the learners.
- Instructional programs should be built on the existing cognitive structure of the individual, taking into account missing, incomplete, or incorrect components of the knowledge/process spiral lattice.
- Rate of exposure to concepts and process skills should coincide with the construction incorporation rate of the individual and should not exceed this pace.
- Curriculum engineering and associated activities should review and utilize prior knowledge and processes in a comprehensive and systematic manner.
- Student evaluation and progress should be charted according to the position of the learner on the cognitive learning spiral of the human experience.
- Teacher education should focus on developing expertise at various chronological stages of cognitive development, rather than separate disciplines, as circumscribed by the physiology and experiential base of the learner and in synchrony with the chronological development of the body of knowledge and the processes associated with its acquisition.
- Learning experiences should be available that are engineered coherently from birth to death.

Conclusion

Without a major change in our fundamental approach to pedagogy, we will not be able to increase the current seven percent science literacy rate in our population by an order of magnitude. To achieve this desired level of understanding in the general populace, we have to abandon our trial and error approach to instructional strategies in favor of a science-based learning theory that dictates a systematic approach to education.

The NET acknowledges the brain's rules for meaningful and lasting

learning and demands organizing the processes of pedagogy based on those rules. The NET provides an integrated, holistic explanation of the recording, filing, retrieval and processing mechanisms of the brain in so far as they relate to pedagogy. Based on mechanistic premises, it provides a theoretical foundation on which sound instructional engineering can begin.

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